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A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

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Manufacturers' Record.

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BALTIMORE, MD., JUNE 2, 1904.

To the plight into which Baltimore has come since its destructive fire four months ago has been added the tragic, lamentable death of Mayor McLane. That came as a terrible shock to all Baltimoreans, who feel that all the material difficulties which they are facing and all other considerations have been overshadowed by that grievous fact.

THE ST. LOUIS EXPOSITION.

The Manufacturers' Record will be represented at the exposition by Mr. Albert Phenix, its Southwestern representative, with office in the Missouri Trust Building.

An illustration of the closeness with which the Manufacturers' Record is read in foreign countries is given in a letter from Mario M. Covo, Salonica, Turkey, who, writing under date of May 13, calls attention to a brief item in a recent issue of the Manufacturers' Record, and says:

I see in your journal, page 305, that the Spray Woolen Mills of Spray, N. C., is in the market for wool of best grade. They are quoting actually our wool at 6 to 6½ per pound f. o. b. New York. You are requested to communicate with this company to see if anything could result.

I will hasten to do all that I can in order to extend American products in our place. Also I am giving hereunder names of different articles which I think large and considerable sales exist always here and in the vicinities. You will be kind enough to put me in business relations with parties who are able to furnish my clients' requirements advantageously:

Cotton manufactured goods, linen, hosiery, sewing threads, steel, nails, caustic soda, ash soda, hides (bull) of Central America, sole leather, splits, box caps, aniline colors, hardware, etc. I used to do all my business with parties who are desirous of entrusting their sole agency for Turkey under five-year engagements so as to have the business in order.

I am engaged chiefly in the export of all kinds of Macedonian skins, such as goats' skins, lambs' skins, sheep skins, coarse wool, etc., and request you to keep me in business touch with the best and approved manufacturers in your country interested in these lines. I am doing large and regular business every season with New York, Boston and Philadelphia, in which places I am already represented.

WATER IN FIRE PROTECTION.

On another page of this week's issue of the Manufacturers' Record are published copious extracts from an exceedingly valuable and suggestive report by Mr. Edward Atkinson on the fire at Baltimore. Discussing the subject from a technical standpoint, he presents it in a style appealing to the lay mind, and one of the points made by him should be taken to heart not only in Baltimore, but in every large city. He says:

If the real lesson taught by the Baltimore conflagration shall lead that city to provide a complete system of water supply, if possible, not only from reservoirs, but also from the water side; if the height of buildings is suitably limited not only for purposes of safety, but to maintain the right light and air in every neighborhood; if roof hydrants and other adequate supplies of water at vantage-points are distributed, then in a very few years Baltimore will have gained immensely in its position, at a cost of the private and insurance losses of the present time, and will set a lesson to other cities which has ever been only half-learned or not learned at all.

This paragraph of Mr. Atkinson's report emphasizes the suggestion, made several weeks ago in the Manufacturers' Record and based upon observations made at the time of the fire, of the value of water in fire protection. It is not enough for a city to have a practically unlimited supply of water at its disposal. The point to be borne in mind is that a city should be able to apply a sufficient amount of water at the right time and in the right place to prevent the spread of flames. This was not the situation in Baltimore. The position of this city in that respect is not unique, but its bitter experience ought to lead it to make of prime importance in its rehabilitation the proper handling of an adequate water supply, and should suggest to other cities preventive measures on the line urged by Mr. Atkinson. New York and Philadelphia are taking the lead in supplementing their normal water supplies with water drawn from the rivers; individual establishments are installing their systems of roof hydrants and water curtains. But a more general adoption of Mr. Atkinson's ideas will have the effect of simplifying the insurance in this country, to the saving of enormous losses for the companies and a reduction of premiums for insurers.

It is reported that a \$150,000 plant is to be established at Crowley or Jennings, La., to manufacture paper from rice straw. With paper already being made from yellow-pine shavings in Texas, from bagasse in Texas and Louisiana, and from the roots of the cotton plant in Georgia, it looks as though paper manufacturers, long dependent upon wood-pulp, might be in sight of a solution of their troubles, and that such utilization of waste in Southern industry might bring about a revolution similar to that which has changed cottonseed from refuse to the basis of an industry having an output of more than \$100,000,000 a year.

SOUTHERN IMMIGRATION AND THE COTTON PROBLEM.

The opportunity of a century, really the opportunity of a nation's life, presents itself to the South today. The eager quest of the world for more cotton, the anxiety which prevails in every cotton mill alike in Europe and New England as to an ample supply to meet the world's increasing demand, gives to the South an opportunity such as this section never before enjoyed. In fact, it is doubtful if any section of the country of the world ever before had such an opportunity. In times past the financial forces of the East and of Europe were united in the ownership of the railroad systems which, by the aid of land grants, had been built through the West, and it was the combined power of these influences which turned into the West the stream of immigration from Europe as well as from other sections of this country. The hundreds of millions of acres of land owned by these roads and those interested in their construction were without value, and the railroads would have been practically without value unless this land could be settled up. Hence the East and South were flooded with literature telling of the great advantages of the West, and there was scarcely a village in all Europe in which pamphlets printed in foreign languages, painting a picture of the West as a land of illimitable possibilities, were not in constant circulation.

Against such a financial combination and such broad work as this it was under the conditions then prevailing impossible for the South to secure settlers from abroad. Later on when the same financial forces became united in the ownership of Southern railroads the time was not propitious for the same character of immigration work which had settled the West, for, owing to unprofitable prices of cotton from 1891 to 1902, the agricultural interests of the entire South presented but few attractions for outside farmers. The cotton "bears" of the world, by forcing down and holding down the price of cotton, had brought about throughout the South such a condition of agricultural despondency that they made it impossible to draw immigration to any large extent into this section. Thus these "bears" helped to "kill the goose which laid the golden egg" for the result of their work was short crops and high prices.

Now the situation has changed. High-price cotton, with a shortage in the world's supply, has quickened in every business and financial center of Europe and America an eager desire for the enlargement of the South's cotton crop. No business problem which the world faces is of more transcendent importance. It is a dominating question in every counting-room and every banking house of this country and Europe, for upon cotton is staked not simply the prosperity of the South, but the very existence of the greatest industrial interest of the world. The men of power and wealth in New England, in Great Britain and on the Continent, who have heretofore had no interest whatever in the South but to be able to buy their cotton at the lowest possible price, now realize that upon an increase of immigration, that there may be an increase in the cotton crop, depends the life of their cotton-manufacturing business. These men know that the South holds the key to cotton production, and that the safety of the world's cotton trade can come only through an increase in our labor supply, that our cotton crop may be increased to meet the rapidly-increasing consumptive requirements. The profitable prices of the last two years have shifted the scene. Before that poverty had for 10 years ruled in the cotton regions; now there is abounding prosperity. So long as poverty reigned it was impossible to secure much immigration, but prosperity is an all-compelling magnet which draws people from all sections and all countries. On the South's side we have prosperity and a pressing demand for labor; on the other side we have an earnest, active effort on the part of the world to increase the cotton supply. As never before cotton is the universal topic of discussion—a discussion which no other crop ever before received to the same extent. These conditions make this the opportunity of a nation's life, for the railroads and others interested in the upbuilding of the South to broaden their work for immigration to such liberal lines as was never seen even in the days of palmy Western immigration work. Now while prosperity reigns, from the West, from the North and from Europe the tide of immigration must be turned to the South. It will not do to say that immigration will come of its own accord; it will not do to say that a year or two hence will be sufficient time for taking up this work; it will not do to plead financial inability. Today is the time of all times. We need to bring population South while prosperity is the order of the day; we need to do this work at once, and to do it on such a scale as to insure the incoming of a sufficient number of people to increase the cotton crop of the South within the next few years to 14,000,000 or 15,000,000 bales. It is incumbent upon the railroads that they shall take hold of this matter with such vigor that cotton production may be so largely increased that there will be no possible excuse for a continuation of the efforts to raise cotton in other countries. The Manufacturers' Record believes that the South is destined to hold its practical monopoly of the world's cotton trade, but to do this we must provide for a very great increase in production, for consumption is rapidly growing, and we can only meet this situation by a heavy inflow of new people. Some weeks ago a leading New England cotton-mill man, one of the foremost of that section, said to the writer:

The world faces a cotton famine. A crop of even 11,000,000 bales is entirely too small, and some means must be devised by which the South can within the next few years

increase its production to at least 15,000,000 bales. I can see only one way in which it is possible for this to be brought about, and that is for a combination of the people of the South, of the railroads and of all others interested in this problem to unite in turning to your section a great tide of foreign population to supplement your labor supply, which is inadequate to meet the emergency.

Are the railroad people interested in the development of the South and Southwest equal to such an occasion? Are they broad enough to grasp the opportunity? These are questions which they must meet. If they let this opportunity pass because of any pretense of financial inability to carry out this work on a scale many times larger than they have ever considered heretofore, they will fail to utilize the one great chance—in fact, the only great chance which has come to the South in a century—for attracting a heavy movement of population southward. All of the questions which confronted the South in times past have been solved, all of the uncertainties which have kept away immigration have been swept out of the way, the business world is on our side as never before, and now with prosperity of the agricultural interests, and with a pressing demand for labor in the cotton fields as well as for independent farmers, the South faces an opportunity such as it never faced before—an opportunity, indeed, of greater promise even than any which the West ever saw. Will the people of the South and the people interested in the South—its business men, its State and county and municipal officials, its railroads and its general corporations, but especially its railroads, as upon them must rest the burden of responsibility and of work—measure up to the opportunity?

THE PLAN OF COTTON BEARS CONFESSED.

A cotton mill and cotton commission man, Southern by birth, now living in New York, in a letter to the Manufacturers' Record says:

Confidentially, I regret to say that Mr. Sully does not seem to have the confidence of business men here, and since he is posing as a benefactor of the Southern people they have little in sympathy with him. You will pardon me for saying that I think your paper makes a mistake to hold him up as a philanthropist.

This paragraph from a personal letter suggests a few thoughts. In the first place, starting at the end of the quotation, the Manufacturers' Record has never suggested that Mr. Sully is a philanthropist. We take it that he is a plain, common-sense business man, and we have no desire to charge him with being a philanthropist.

The Manufacturers' Record is not at all surprised that there is a very large element of "business men" in New York, especially business men known as cotton "bears" and "bear gamblers," let us call them, who have not much confidence in Mr. Sully. He upset their plans too much for that. But it is a little amusing, and it throws something of a light upon the situation, to be told that "since he is posing as a benefactor of the Southern people," therefore these New York people "have little in sympathy with him." That is the most honest confession that the Manufacturers' Record has seen for a long time. We are not at all surprised that the cotton bears of New York have no sympathy with anyone who either "poses as a benefactor" or who proves to be "a benefactor of the Southern people;" in fact, so great is the pressure of the cotton bears of New York against everything tending to benefit the cotton interests of the South that only a week or two ago we had several letters very strongly urging the Manufacturers' Record not to publish an article then in hand which was a criticism of the New York Cotton Exchange, although the article had been written by a member of the Exchange who had previously on numerous occasions urged its publication in the Manufacturers' Record. His urgency to recall it looked very much like sufficient "pressure" had been brought to bear upon him to make him afraid to have his criticisms published, which at one time he had been anxious to father over his own name, but which now he was afraid to have used even without his name.

The world-wide combination against the cotton-growers of the South is one of the most remarkable phases of international business connections. Having by the power of the combined wealth

of the cotton manufacturers of the world beat down the price of cotton, not to the bare point of a living for the producers, but below the actual cost of production, and having kept it down to such figures for eight or nine years to the impoverishment of Southern farmers, the cotton spinners and their allies, the "bear gamblers" of New York and Liverpool and other places, held up their hands in holy horror at any effort made to advance the price of cotton to a figure which yields a living profit to the grower. Mr. Sully and those who with him appreciated the statistical situation of a steadily-growing shortage in cotton saw that in order to bring about a larger cotton crop it was absolutely essential to give to the grower a better price, and, proclaiming these views everywhere, began a fight for higher figures. In doing so they revolutionized the cotton industry. Such a leader was needed—one intimately acquainted with cotton and able to make a fight vigorous enough to attract the world's attention. Nobody can deny that he did this; no one can deny that last spring and summer he and the other bull leaders fought such a battle for higher prices as to prevent the "bear" gamblers from getting hold of last season's cotton crop at seven to eight cents a pound, and that in doing this they added \$100,000,000 or \$200,000,000 to the wealth of the South. Last fall Secretary Wilson of the United States Agricultural Department, with unpardonable interference with trade conditions, took a position that helped to strengthen the cotton mills of the country against buying cotton until it could be beat down to lower figures. The mill people believed him, and to-day New England mills and some Southern mills face losses aggregating many millions because they thought Secretary Wilson's talk would help them to break prices. Again the same game is on. Last week the Manufacturers' Record told of the International Conference of Cotton Spinners at Zurich, Switzerland, called for the purpose of devising ways and means to keep down the price of cotton, and of suggestions looking to the same end by Mr. Macara, president of the Federation of Master Cotton Spinners' Association of England, in which he undertook to set the price at which the South ought in effect to be compelled to sell its cotton as seven cents a pound. This week a large Southern cotton operator, for many years a "bull," said to the Manufacturers' Record: "A combination has been formed to beat down the price of cotton this summer to seven cents a pound in order to be able to buy the new crop at a low figure. So strong," said he, "is this combination, and so certain am I that it will be suc-

cessful without regard to the size of the crop eventually gathered, that I am planning to put every dollar which I can raise into selling cotton short, convinced that the combination is financially able to carry through its 'bear' campaign."

That statement is from a man of prominent position for a quarter of a century in the cotton world. It seems to tally very closely with the seven or eight cents to which Mr. Wilson thought cotton could be hammered last fall, and with the seven cents at which Mr. Macara thinks the cotton-grower ought to be compelled to part with his staple. The work has already commenced. In every direction there are signs that the campaign has opened and that unless some leader can be found equally as daring and as resourceful as Sully proved to be until forced out by such a world-wide combination of wealth and power as was brought against him, the South may again be made to suffer by low-price cotton. The game now is, as it has been in the past, to force prices down during the summer and early fall in order that the "bear gamblers," whether they be mill-owners or only speculators, can secure control of a large portion of the crop early in the season and let the advance take place later on, and thus reap a double profit.

The Manufacturers' Record has never hesitated to express its opinions wherever the interest of the South is concerned, whether its opinions were in harmony with the views of the general public or not, and hence it has presented some facts on the bull side of the case, because it would be recreant to its work if it did not uphold every effort which tremendously advanced the prosperity of this section. In this case it may be accepted that the "cotton bears" of the world, who represent some billions of capital, will use their influence in every way possible to discredit Sully, Brown, Hayne, Majors and every other great leader who has helped to awaken the South to its own strength by helping to bring about a fair price for cotton.

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 70 and 71.

NEW RAILROADS IN MAY.

Thirty new railroad companies were incorporated or organized during May in the South and Southwest. This is the greatest number reported thus far in any month this year. There were 12 in January, 10 in February, 27 in March and 14 in April, thus making a total of 93 new companies reported since January 1, and indicating that there will probably be about 225 new railroad incorporations in those sections during this calendar year. The total mileage of these new lines reported in May is 2097, making a total of 9105 miles projected by the different new companies reported for the five months.

Arkansas reports the largest number of new companies during May, 13, with a total of 304 miles projected, the longest line being 82 miles and the shortest

10. Most of these are incorporations for lumber railroads, which it is desired to make common carriers. Ten of these small roads were reported in a single week, and this shows to what extent the lumber resources of Arkansas are being developed. The importance of these small roads is also considerable, as they in time become parts of the railroad system of the country, gradually extending as the lands are cleared and opened up and as settlements and towns are established along their lines. The longest of these Arkansas lines is the Arkansas Western Railway, which is to build from Waldron to Hot Springs. Next is the proposed Hoxie, Strawberry River Valley & Western Railroad, with 50 miles of line proposed from Hoxie to Franklin, Ark. The rest of the 13 roads are of 25 miles or less each.

Kentucky reports three roads, with 116 miles projected; Louisiana also reports three, with 134 miles projected, and Oklahoma an equal number, with 1250 miles in prospect, one line of 1000 miles being the Denver, Woodward & Southeastern Railroad, which is planned to extend from Texarkana across Indian Territory and Oklahoma to Denver, Col., so that while Oklahoma is its place of incorporation, most of this line will be constructed outside of her borders. Virginia and Tennessee report two roads each, with 40 and 85 miles, respectively, and Florida, Indian Territory, Texas and West Virginia report one road each, with respective mileage as follows: 35, 80, 51 and 12.

The Denver, Woodward & Southeastern Railroad is the most ambitious of any of these new projects reported during the past month, but there are several others of importance, notably that of the Missouri, Kansas & Oklahoma Railroad, which amended its charter to build an extension of 150 miles from Oklahoma City to the Texas State line, and also to build the projected Onaga Railroad. Another company of importance is the Houston-Galveston Interurban Railroad, which has been formed to build the long proposed electric railway to connect those two cities by a line 51 miles long. The Opelousas, Gulf & Northeastern Railroad, to be built from Moreauville to Crowley, 70 miles, and the Baton Rouge, Lafayette & Gulf Railroad, to be constructed from Baton Rouge to Breaux Bridge, 52 miles, are reported from Louisiana. Then there are the Guthrie, Fairview & Western Railway, to build from Guthrie to Fairview, in Oklahoma, a distance of 65 miles, and the South McAlester, Red River & Gulf Railway, an Indian Territory line to run from South McAlester to the Red river, 80 miles. The East Tennessee Railway is designed to run from Chattanooga to Oliver Springs, Tenn., 75 miles, with a branch to Harriman.

While the mileage of these new lines reported during May is not as great as that of those reported during either March or April, the increased number of incorporations illustrates the continued and growing demand for railroad facilities and indicates that considerable construction will be done during this year and 1905.

BRINGING THE BUYER AND SELLER TOGETHER.

What Our "Machinery Wanted and Proposals" Department Does for Both Sides.

The value to business people throughout the South, as well as to contractors, engineers and machinery people generally throughout the country, of the "Machinery Wanted" columns of the Manufacturers' Record is being very strongly emphasized every day. Illustrations of this are seen in the wide diversity of machinery and contract work desired and of the wide ter-

ritory covered by these inquiries in a few sample cases which have come to hand during the last day or two.

The Carolina Veneer Works, Clinton, N. C., wires that it "wants immediately 80-horse-power boiler and 50-horse-power engine."

The Lexington City National Bank, Lexington, Ky., writes that it wants to

receive bids for the erection of an office building, and is anxious to have this fact made as widely known to contractors throughout the country as possible. The estimate of the cost is in the neighborhood of \$150,000, and the Manufacturers' Record is asked to make these facts known for the benefit of the bank in receiving competitive bids, as well as for the benefit of contractors who are looking for such information.

The Chouteau Land & Lumber Co., Bloomfield, Mo., writes that it will incorporate a company, with an initial cash capital of \$25,000, for the manufacture of barrels, heading and hoops, and wants the Manufacturers' Record to advise its advertisers that it is in the market for engines, boilers, tanks, pumps, kilns, vats, etc.

The State Bank of Gentry, Gentry, Ark., asks us to publish the fact that it expects to build a new bank building of stone and brick during the coming summer or fall, and is looking up plans for the front.

Isaac T. Mann, vice-president of the Bank of Bramwell, Bramwell, W. Va., says: "I am having plans prepared for a residence to be built in the town of Bramwell at a cost of about \$20,000, and I shall be ready for bids for the construction of the same by June 15. I shall be glad to have you let this fact be known."

Richard B. Fentress of the Baltimore Refrigerating & Heating Co., Baltimore, and S. B. Medairy are applying for an electric-light franchise in Baltimore, and write: "We will begin to install plant as soon as the franchise is granted. We expect to expend from \$500,000 to \$1,000,000 on it, and will want competitive bids on machinery."

Piedmont Electric Co., Asheville, N. C., asks for prices on second-hand boiler and engine.

G. E. Pitcher, Bay St. Louis, Miss., wants brick machinery.

Several builders in Baltimore having contracts for large warehouses want full equipment and supplies—steel work, roofing, fire-escapes, wireglass, metal frames and sashes, etc.

The Thomasville Lodge of Elks, Thomasville, Ga., wants prices on plumbing and heating equipment.

The West Point Manufacturing Co., West Point, Ga., wants bids for the erection of a large cement dam.

The Interstate Electric Co., New Orleans, wants to buy alcohol engines.

The Hartsfield Ginning & Manufacturing Co., Hartsfield, Ga., wants cotton-ginning equipment.

Ben Aymett, Pulaski, Tenn., wants a merry-go-round.

The Raine-Andrews Lumber Co., Gladwin, W. Va., is in the market for galvanized pipe for water lines and sewer pipe.

These are simply a few illustrations of many that come to the Manufacturers' Record every day. They are indicative of the wide character of its circulation among bankers, manufacturers, land and lumber companies, furniture factories and other leading interests throughout the entire South and Southwest. Information of this kind which comes direct to us from all over the South and Southwest is published every day in the Daily Bulletin of the Manufacturers' Record in connection with our general Construction Department, in order that those who want to keep in touch with all lines of industrial development and building operations may have the earliest possible news. This feature of the Daily Bulletin and of the Manufacturers' Record has proven invaluable to thousands of readers throughout the South and Southwest as buyers, as well as throughout the North and West to sellers. It brings the buyer and the seller into the closest touch. The Manufactur-

ers' Record invites information of this kind from its readers of all sections, without regard to whether they are subscribers or not. These inquiries are published free of all cost, and prove invaluable to those who contemplate building operations of any kind, to those who want machinery or mill or mine equipment, as well as to contractors, builders, makers of and dealers in machinery. In no other way than through the Manufacturers' Record and its Daily Bulletin can engineers, contractors and machinery people keep informed of what is going on in the South and Southwest, nor keep in touch with the opportunities which are thus presented to them.

Yazoo City's Loss.

Mayor Holmes of Yazoo City, Miss., estimates the loss by fire there last week as follows:

"It is almost impossible just at this time to estimate the loss the city has sustained. Various prominent citizens have placed it from \$1,000,000 to \$2,750,000. I estimate it at \$1,750,000.

"While there have recently been numerous conflagrations in the large cities, where the loss aggregated more than the one we have suffered, I doubt if there has ever been a fire where the loss has been greater in proportion to the assessed valuation of the property of the city. Nineteen-twentieths of the business portion of the city has been completely destroyed, and about one-sixth of the residences, while not a single one of the five churches was spared. The postoffice, every lawyer's office, every doctor's office, every drug-store, every hotel and boarding-house, the Elks' lodge and the Calumet Club, the only two clubs in town; every restaurant, the three newspapers—the Herald, the Sentinel and the Saturday Evening News—the City Hall, the fire-engine house and the Masonic Hall were completely destroyed; also every bank in town was burned to the ground."

Arkansas River Traffic.

After many years regular navigation of the Arkansas river between Little Rock and the Mississippi river and points on that stream has been resumed through the extension to Little Rock of the service of the Memphis & Arkansas River Packet Co. In view of that fact the river committee of the Little Rock Board of Trade has submitted resolutions to that organization pledging every effort to direct to the Packet Company a liberal share of patronage and urging that contracts covering the business be made between the shippers and the transportation line that will prevent the withdrawal of the boats from the trade. It is expected that this resumption of service may hasten the improvement by the government of the Arkansas river.

Louisiana Marble.

Judge W. W. Whittington of Alexandria, La., says that in the northwestern part of Rapides parish and in the southern part of Natchitoches parish are quarries that could furnish all the marble needed in New Orleans, and that it could be shipped by water, as the quarries extend to the Red river. Alexandria has used a good deal of the marble in constructing its streets.

Commercial Association Wants Secretary.

An opportunity is offered an energetic and progressive man to secure a position in a growing Southern city just at this time. The city is Danville, Va., and the opportunity is comprised in the desire of the Commercial Association there to secure a permanent secretary. J. O. Boatwright, the acting secretary, can be addressed for information.

VIRGINIA ANTHRACITE COAL.

Its Development in the Blacksburg Region and Its Prospect.

By L. S. RANDOLPH, Mem. Am. Soc. C. E., Blacksburg, Va.

[Written for the Manufacturers' Record.]

In order to properly describe the development of the coal in the Virginia anthracite coal fields it would be well to describe the field as it exists and the nature and extent of the known deposits. The consensus of the opinion of our best geologists is that the coal formation is what is known as the pocono sandstone of the Oriskany measure. These formations are barren of coal in the Pennsylvania region except in one or two instances a seam of coal one or two inches in thickness has been discovered. At Meadow Branch, near Cherry Run, on the Baltimore & Ohio Railroad, the seam is again apparent, having thickened up to about 18 inches, but the whole formation is inverted and very much distorted, so that the coal is useless for market purposes. It has been known for the last 40 or 50 years that such coal deposits existed at this point, and numerous attempts have been made to market the property. The coal formation again shows back of Winchester, Va., in Highland county, in Roanoke county back of Salem, and in Montgomery county in the vicinity of Blacksburg, the formation running on up through Pulaski, extending from there a short distance in Wythe county. All of the indications point to the fact that all of the paying coal of these deposits lies in Montgomery and Pulaski counties. Outside of these two counties the coal is either pinched out or so broken and crushed as to be valueless commercially except for some metallurgical purposes.

So far the only paying mining has been done in the Blacksburg region and in the Pulaski region on the Norfolk & Western, where the outcrop crosses the New river. The old Bell Hampton mine was opened and operated some 10 or 15 years ago, and a number of miles of narrow-gauge road were built to carry the coal to the Norfolk & Western Railroad. After being operated for a few years the property was abandoned and the rails taken up from the railroad.

Cross-sections of the seam in Brush mountain, Price mountain and the Pulaski region show that in the Blacksburg field there are three separate outcrops of the coal, in which outcrops, only one, the Brush mountain, is continuous from Pennsylvania to Wythe county. The character of the coal changes quite rapidly, and all developments are dependent upon the most thorough prospecting. On the cross-section of the Pulaski seam, which is an extension of the Brush mountain field, the band of dirt or minings is very much greater than in the Brush mountain field. Again the marked similarity between the Brush and Price mountain fields shows these formations to be the same, and it has been held that the similarity of the deposits, together with the fact that they are dipping towards each other, indicates that the coal lies under the Blacksburg valley and that the axis of the basin is coincident with that of the valley. This is unquestionably incorrect, and the true condition is that shown on the cross-section where the upheaval of the Trenton limestone is indicated. The Price mountain field disappears entirely north and south of the mountain, indicating that all that part of the field has been exposed and eroded with the exception of this deposit in Price mountain.

The total estimated acreage of the Montgomery field is about 7000 acres. This includes the coal between the coal outcrop and the limestone outcrop. Indications

are that the coal is minable within a few hundred feet of this limestone fault; hence the entire region between the coal outcrop and the limestone fault is included. This estimate also throws out considerable property where the strata are so faulty and broken as to make mining impracticable. The extent of the deposits of the Pulaski field is yet to be determined, but is almost as extensive as the Montgomery field. It extends and has been more or less developed from New River to the city of Pulaski, but all operations except those at New River have been practically abandoned. The coal, as shown by chemical analysis and by its physical characteristics, has rather a striking resemblance to the deposits in the Lykens valley region of Pennsylvania. Its luster is not as great as the usual run of Pennsylvania coal. It is more tender and carries more volatile combustible, but it gives absolutely no smoke except with very careless firing; chimneys are entirely free from soot, and the ash is white, though in some places there is sufficient iron to give it a reddish tinge. For ordinary domestic uses there is little or no clinkering except where fires are very heavily forced. Certain constituents of the ash seem to melt and form just the right amount of clinker to give satisfactory results for steam boiler work. The chemical composition is shown by the following results obtained from samples selected by the writer:

	Price Mountain.	Brush Mountain.	Pulaski.
Volatile combustible and moisture.	10.2	9.3	10.7
Fixed carbon.	79.4	79.6	73.1
Ash.	10.4	11.1	17.2
	100.0	100.0	100.0

The above represents average results obtained from analysis made by the writer, by Professor Price of the Virginia Polytechnic Institute, and by others. The coal seems to carry a considerable amount of occluded gases, but only at one point, viz., on the south side of Price mountain at the Merrimac mines, has fire-damp been discovered to an appreciable extent.

The coal outcrops on the flank of the mountain, usually pretty well towards the top. So far five seams have been discovered, running in thickness about as follows: No. 1, 5½ feet; No. 2, 2 feet 3 inches; No. 3, 6 inches; No. 4, 4½ inches, and No. 5, 2 inches. No. 1 is mined in the Price mountain field, but in the Brush mountain and Pulaski field both No. 1 and No. 2 seams are worked, particularly in parts of the Brush mountain field where the No. 2 seam widens out to three feet, and as it has only one thin slate parting, it can frequently be mined to greater advantage than the larger seam, where only a small amount of coal is needed for home consumption.

The development of this region has been very singular. Prior to the Civil War coal was mined on the south side of Price mountain near the eastern end, and marketed in rather an extensive way, considering the times. The late Mr. Montague of Christiansburg, Va., and Mr. I. H. Adams, now a resident of Lynchburg, Va., were operating at that time and had sunk slopes to a depth of 450 feet to 500 feet, finding good coal all the way. Their mines were destroyed in a raid made by General Averill near the close of the war. It is claimed that some of this coal was in the bunkers of the Merrimac, or more correctly the Virginia, in her fight with the Monitor in Hampton Roads, the coal being shipped by the Norfolk & Western Railroad from

Christiansburg depot, which is about four miles from the old Montague operations near the present village of Merrimac.

Since then the field has been handled entirely by local men digging a little here and there, seldom over 50 or 100 feet, when the difficulty of removing the water would become too much for their engineering skill and they were forced to abandon their workings. The fact that nearly all of the coal had to be handled over mountain roads, which are for months utterly impassable, made the season practically from the middle of August to the last of November, thus making it so short that it did not pay for any large amount of capital to enter into the venture. The whole outcrop, however, in the Blacksburg and Pulaski region is honeycombed with these small openings, many of which have fallen in and all surface indications been erased by the hand of time. While these openings have done nothing more than to enter the outcrop, thus taking the coal which is usually left in all good mining operations, they have served to develop the region and serve to show very thoroughly the character of the deposits, and hence, when carefully examined, prevent very effectually capital being wasted in unprofitable seams. Much that has been said in regard to the Blacksburg region can be said of the Pulaski field, with this exception, however, that in the Pulaski field in the last eight or ten years practically all operations have been abandoned except one, the Kimball mine, and in one case, as we have seen, a line of narrow-gauge road was taken up and the mine closed down on account of the unprofitable character of the deposit. The large amount of slate and the large seam of dust in the center of the seam, amounting in seam shown to three feet, makes the cost of mining excessive. The only mine that has been kept running in this region is what is known as the Kimball mine, where the outcrop crosses the Norfolk & Western on New river and the mine mouth is immediately at the railroad. This property has been recently acquired by the American Coal Co., which is making extensive improvements, and which has a very promising outlook.

The developments in the Blacksburg field, except the amount of coal handled by local parties, was largely abandoned after the Civil War, and all deposits laid idle there until in the spring of 1898 the Brush Mountain Coal Co. was organized with L. S. Randolph, president, and Guy F. Ellett, secretary and treasurer; G. W. Walters, Dr. R. T. Ellett and Mr. Ed. Gardner as directors and stockholders. These gentlemen purchased a large amount of the Price mountain field, which, being much nearer to the Norfolk & Western Railroad, and controlling the only feasible route for a railroad through Price mountain, practically controlled the situation. These gentlemen carefully studied the region, leased one mine to a competent local party and in other ways developed the mines carefully and thoroughly and put the whole region on a good basis, showing what the property was worth and demonstrating thoroughly the enormous value of the property. To these gentlemen is due the rediscovery and development of the region.

In the fall of 1902 these gentlemen became associated with Mr. W. J. Payne of Richmond, Va., and the latter, after leasing the coal-mining rights of the Brush Mountain Coal Co., organized the Virginia Anthracite Coal Co., and, taking over a charter for a railroad from Christiansburg to Blacksburg which had been secured by the Brush Mountain Coal Co., organized the Virginia Anthracite Coal & Railway Co. Mr. W. J. Payne of Richmond, Va., is president of the coal company, and Mr. T. L. Newell of Kingston, Pa., is president of the coal

and railway company: The Virginia Anthracite Coal & Railway Co. has extended its road to Merrimac mines, in Price mountain, and is now arranging to extend to Blacksburg, after which the road will be extended to the Brush mountain field.

The companies now operating in the Blacksburg region, with the exception of the Virginia Anthracite Coal Co., own but a few hundred acres of coal land. With the exception of these, practically all of the coal property which contains minable coal has been acquired by the Virginia Anthracite Coal Co., which holds by lease or direct purchase 1000 acres in the Brush mountain field. That is all of the minable coal north of New River except a few hundred acres owned by other companies in the hands of private parties.

The mining operations of the American Coal Co., which is operating the old Kimball mine at Dry Branch, on the Norfolk & Western Railroad, are in charge of Mr. Parrott of Salem, Va., who was for many years manager for the same company at Lonaconing, Md., in the George's Creek bituminous field. This company is erecting a large tipples at Dry Branch, together with some 40 miners' houses.

The mining operations of the Virginia Anthracite Coal Co. are in charge of John R. Wilson, who was born and raised in the Pennsylvania region, and until coming to the Virginia Anthracite Coal Co. was prominently connected with the Delaware, Lackawanna & Western. This gentleman is thoroughly posted in mining and handling coal of this character. The coal company has erected a breaker which was designed by Messrs. Pettebone & Ireland, architects and engineers, of Wilkesbarre, Pa., where the coal after it is hauled from the slope is prepared for the market by a thorough screening and sizing. This breaker has a capacity, with the machinery at present installed, of 500 tons a day, and by installing duplicate screens and other machinery the capacity can be more than doubled. The breaker also has a storage capacity of 500 tons. The coal is hoisted direct from the mine mouth to the top of the breaker, where it is dumped into a large pocket, from which it is drawn onto the picking table, where all the lumps of slate are removed. From the picking table the coal goes to the crackers, and thence to the mud screens, where the culm is removed. The coal is then hoisted to the top of the breaker and run through the screens, which sort it into the various sizes, the sizes being the same as those adopted in the Pennsylvania field. The coal, after being sized, is again run over automatic slate pickers and again hand-picked. This breaker is now running 40 to 50 cars per month.

Work is now being pushed very rapidly on the mines, sinking the slope and driving entries, and as soon as sufficient ground is opened up additional machinery will be installed so that the breaker may be raised to its maximum capacity of 1000 tons a day.

The company is erecting a large number of employees' houses, and is rapidly extending its facilities for handling business. It has a commissary, and is now employing 70 or 80 men. Agencies have been established in Cincinnati, St. Louis, Roanoke and Richmond, where the coal sells in competition with the Pennsylvania coal.

Options are being secured in the Blacksburg valley with a view to boring with a diamond drill in order to ascertain if any coal exists at that point. These options are being obtained by Scranton parties. So far the market has been absorbing the supply readily, and seems to be almost unlimited in extent at prices comparable with the Pennsylvania product.

The seventh annual session of the American Mining Congress will be held at Portland, Ore., in the last week in August.

Revelation of Texas at the St. Louis Exposition.

[Special Correspondence Manufacturers' Record.]

St. Louis, Mo., May 30.

Texas Day at the Fair, Thursday, May 26, gave not only an occasion for the attendance of the governor of the State, members of the Texas World's Fair commission and many hundreds of gratified citizens of the Lone Star State, but it also served to call attention to the remarkable feat accomplished by the people of Texas in securing a splendid representation at the World's Fair without one dollar of public funds. With a State building appropriate, imposing and one of the largest and handsomest among the group of State buildings, a complete exhibit in a number of the most important departments on the ground and representation in even the jealously-guarded Palace of Fine Arts, it was everywhere conceded that with entire propriety could the Texan heart swell with pride as the story of their achievements was unfolded by the speakers on the occasion of the formal dedication last Thursday. President Francis warmly congratulated the assembled Texans on the spirit that had been shown, and pointed out that as Texas was originally included within the Louisiana purchase, and was only relinquished to Spain by subsequent negotiations, it would have been a very incomplete Louisiana Purchase Exposition without an adequate representation from Texas. The speechmaking over, a formal reception was held, prominent Texas ladies being the hostesses, and the spacious building was thrown open to public use.

Following up the statements of the speakers and visiting Texas exhibits in the various palaces some very interesting facts are revealed as to what Texas has done here, and how. In the first place, the means must be considered as of scarcely less importance as a Texas "exhibit" than are the products of the field, the farm, the mine, the forest, the hill and the plain, to be found in the exposition palaces. For the Texas people themselves, failing to secure favorable legislative action, raised by popular subscription every cent of the \$160,000 that has so far been expended, and with the additional \$25,000 that will be required to complete and pay for everything as designed, more will have been accomplished than most people on the grounds could have done with \$250,000. Thus the State building, of massive proportions and built with five pointed wings to give the house a starlike form, was built by Texas people out of Texas lumber—timbers, finish and all—and is furnished with chairs and tables made in Texas out of native oak. The building cost \$51,000. When it was talked of letting the job out by contract to people on the ground bids were secured. They ranged from \$65,000 to \$125,000 for the work the Texans have done for \$51,000.

John H. Kirby is president, and Louis J. Wortham is general manager of the Texas World's Fair commission. The railroads and express companies and others have contributed to the financial saving noted, but good management on the part of the commission has been manifested in every detail of the successful and highly creditable achievement. Texas enjoys in this undertaking the distinction of being the only State or section of any country which is present at the fair through means raised wholly by private subscription.

In minerals, agriculture, horticulture, forestry and education the exhibits are full and strikingly fine. Besides these, there are in the Transportation Building wagons made of bois d'arc, almost indestructible, and logging wagons, etc.; in Machinery Hall is a Corliss engine, every part of which was made in Texas, and in the Fine

Arts Palace is a recumbent statue of Albert Sidney Johnston in marble, the work of Elizabeth Ney of Austin, two busts by the same sculptress and a bust by Pompeo Coppini of San Antonio. Coppini also has a remarkable plaster group in the Texas building, "The Galveston Storm," a grief and terror-stricken mother standing on wreckage holding a dead babe in her arms, with two other children clinging to her knees, while from out the wreckage protrudes the arm of a struggling man. It is a powerful conception, worked out with striking and artistic detail, and is certain to attract much attention. The pieces admitted to the Palace of Fine Arts were all passed by the unanimous vote of the jury.

Agriculture and cattle are well-known features of Texas' rich resources, although even then it is hardly understood how commanding is her position. Texas owns more cattle than any three States combined, and raises nearly one-fifth of the total for all the United States. But further than this, Texas is first in number of horses owned, and produces one-fourteenth of all in the United States. She also stands first in mules, producing one-seventeenth of all in the United States, and outranking even Missouri, which might add the product of any other State without then coming up to Texas. Texas stands sixth in number of milch cows, the same in hogs and tenth in sheep. Although but one acre in six of her total area is in cultivation, Texas is first in cotton and its products, fourth in corn, fifth in winter wheat and seventh in oats. The total value of her annual output of agricultural products, fruit, truck and live-stock is now \$327,000,000. Contributing now one-twelfth of the total crop production of the United States devoted to the feeding and fattening of live-stock, she could, by utilizing all her acreage, produce one-half the agricultural wealth of the nation.

Agricultural Hall may therefore be expected to contain an important feature of Texas' presence at the World's Fair, and in this expectation the visitor will not be disappointed. Occupying a space 62x91 feet in size, cornering on the central square of the hall, the display surrounds a striking pagoda, with the ever-present star decorating the four sides and having a dome made entirely of raw cotton. The four stars contain scenes typical in a broad way of the products of the four sections of the State, all worked out in different-colored seeds and grain, together with corn husks and corn silks. Thus the west is represented by a cowboy on a bucking broncho, with a ranch scene in the background and a border of cattle horns and cows' hoofs. The east shows a scene typical of the timber resources of the State, and is decorated with pine cones. The southern picture is decorated with the shells of the Gulf, and shows the rice, the cotton, the cane and the corn of that section. The north side presents a manufacturing city, a railroad train, diversified farming and "Prosperity" worked in wheat and corn.

Inside the pagoda is a pyramid of flour, all in sacks of satin and silk, arranged for the fair and representing some 30 Texas mills. It is a story often told of how a Denton county miller sent some flour to Paris in 1900 and surprised the milling world by winning the blue ribbon over all competitors. Texas raised 20,000,000 bushels of wheat last year, and in the northern portions of the State the flouring-mill industry is of large and increasing importance.

The Texas space is enclosed by a fence, the base of which is made of miniature cot-

ton bolls, surmounted by glass tubes 14 inches long in the form of a picket fence. These tubes contain the various grains of Texas, and just inside the fence is a representation of the growing fields of Texas grain. Rice, oats, rye, wheat, millet, Kaffir corn, milo, maize, etc., are here seen somewhat as they look in the Texas fields, while inside are baled specimens of the forage crops of Texas, numbering 75 distinct and separate varieties. Here also is broomcorn and the much-talked-about Nacogdoches tobacco. Cotton bales, full size, but in fancy coverings of cloth and silvered ties, occupy a conspicuous place, and cottonseed-oil products, present now to some extent, but to be greatly added to, will form an important feature of this display. Vegetables, fresh and in jars, which will be added to as the season advances, indicate the growth of the trucking industry in Texas, and one of the striking features of the exhibit will be the appearance of first and second crops from the same ground this year. Already early potatoes are being displayed, and as there are 18-foot stalks of corn in the exhibit which matured as a second crop last year, corn and other second crops will be brought here as they mature this year. A great many articles can be successfully raised as second crops. Following Irish potatoes corn may be planted as late as the middle of July; sweet potatoes may follow beans, and cotton may follow any early-maturing vegetable. The truck-growers of East Texas raise two crops at least every year, and some of them three or four. The demonstration of the general adaptability of a large part of the State for intensive and diversified farming is counted on to be one of the strong features of the agricultural display.

The tomatoes of North Texas have become famous for their quality and for the fortunes they are bringing the tomato-grower. A display will be made of them, and another interesting feature will be the big white Bermuda onion that is now being so successfully raised in Southwestern Texas. Leroy Trice, second vice-president and general manager of the International & Great Northern Railroad, has a letter from some young men who went out to Laredo a few years ago and this year have raised and shipped from 40 acres 45 carloads of onions, for which they received between \$27,000 and \$28,000, at a total cost of \$6500. As showing the growth of this industry, Mr. Trice reports that whereas his road hauled 12 carloads of these onions two years ago and 120 last year, it will haul 400 this year, and expects to haul 1000 next. He also reports, as indicating the growth of the fruit and trucking industry of the northeast section, that his road alone, which hauled nothing in carload lots five years ago, will handle 3000 carloads this year.

In her horticultural exhibit Texas furnishes a distinct surprise to even the people of most parts of Texas in the excellence and variety of apples shown. As a producer of fine peaches, strawberries, melons, tomatoes, etc., Texas has within the past five years established a reputation of the highest rank in the markets of the North and East, but the present display in Horticultural Hall is the first notice the public has had of an extensive and successful venture into the raising of apples. On the shelves of the Texas exhibit in Horticultural Hall there are 42 different varieties of apples, all of them most excellent specimens of their species, and forming a display scarcely inferior in extent to that of recognized leaders among apple-growing States. The specimens shown are mainly from the counties of Kaufman, Montague and Erath, widely separated counties, which would seem to indicate that a considerable portion of North Texas is adapted to apple-raising. The condition of the

fruit is perfect, ample evidence that Texas apples will keep as well as any others, and altogether there would seem to be justification for the declaration of Mr. Sam H. Dixon, chief of the department, that the Texas apple display will astonish the world.

In this exhibit there are also a fine lot of Keiffer pears, large of size and in perfect state of preservation, and the territory in which they thrive covers a large part of the State. A few early peaches from the famous peach belt of the State are on exhibition, these specimens coming from Omen, Smith county, and from Arp and Jacksonville. It is announced that as the various fruits of Texas ripen they will be shipped daily from the orchards in carload lots, so that from now to the end of the fair fresh specimens in great abundance will be provided. Peaches, plums, pears, apples and grapes will be the principal varieties.

Oranges and lemons are shown, and the claim is frequently made that down in the Brownsville section climatic conditions are as favorable for citrus fruits as in the best portions of Southern California.

A fine collection of preserved fruits is shown, among them a jar of figs from which the skins have been removed by a process known only to the canner, a lady of Houston. It is stated that so highly prized are these preserved skinless figs that the Waldorf-Astoria buys the entire output and would take more if obtainable. Discussion of the preserves here shown, by the way, brought out a fact not generally known, that beet sugar is not used by canners, as it is lacking in preservation qualities, and the canners of California are heavy purchasers of Texas and Louisiana cane sugar.

Another feature of the Texas exhibit which, next to apples, will surprise the world, is the vastness of the Texan pecan production and the superiority of the specimens. There are here assembled 178 varieties of pecans, and all of them are of the thin-shell kind. Some are finer than others, naturally, and the shells are not of equal thinness, but about all of them can be cracked with the fingers, and some are so thin they break in falling from the trees. Experts declare this to be the finest collection of pecans ever got together. The important position Texas occupies as a producer of pecans is established by the statistical fact that 67 per cent. of all the pecans raised in the world are supplied by Texas.

The Texas display in the Forestry Department is in keeping with the exhibits elsewhere; in fact, the display of woods made by all the Southern States with the exception of Florida is complete, attractive and altogether creditable. Almost everybody knows how extensive are the yellow-pine forests of Texas and how important is the timber industry of that State, but none but timber men know that the white-oak growths of Texas are among the most extensive now standing, and even timber men will be surprised to see that Texas has assembled here over 130 different varieties of woods, most of which are available for commercial purposes.

The Texas exhibit consists of a room of native Texas pine logs, and another showing on its exterior and in its interior finish panels and posts of yellow pine and more than 30 other kinds of wood. The oaks, 10 or more varieties; tupelo, black and sweet gums, curly cypress, curly pine, white ash, maple, holly, red cedar, etc., are among the finished pieces, and Texas ebony—sold by the pound—and mesquite, that looks almost as fine as mahogany, are some of the unusual woods encountered here in finished shape. In the unfinished room is a full display of stock samples, showing the wood in the rough and with a finished end. Here are a number of

freak pieces from along the Mexican border, all strange in appearance, as the tree with scaly bark like horn, and of queer names, as the "toothache" tree. Some of these woods are interesting merely on account of their peculiarities; but it is quite possible the exhibit here made will point opportunities for exploiting numerous woods now but little valued.

Much as has been done in the development of Texas' resources, and much as is now being done in that line, Texas is still a vast region of undeveloped resources of every kind. In the Department of Mines and Metallurgy, where a most interesting display has been installed by Dr. Wm. B. Phillips of the University of Texas mineral survey, with the co-operation of the Texas World's Fair commission, the opportunities for exploitation are suggested to the visitor as one of the most striking features of the display. There is alum, quicksilver, gold, silver, copper, tin, lead, zinc and iron; there is oil from a dozen counties and paraffin from one; sandstone, limestone and building stone are here from half a dozen counties, and the display includes marble, granite, onyx, serpentine and a peculiar opal granite from Llano county called Llanoite. The granite of Texas is now becoming known abroad, and the new custom-house at Kansas City is to be constructed of this material. The samples of silver are from the Presidio Mining Co. of Shafter, Presidio county, which has mined \$8,000,000 worth of ore in the past 15 years. The quicksilver comes from Brewster county, and the works are 100 miles from a railroad. A large kettle containing quicksilver is one of the show features of the fair. In the kettle are 1200 pounds of quicksilver, worth \$700, and floating cannon balls and iron plates, some of them weighing as much as 20 pounds, add to the interest of the display. Quicksilver occurs in Texas in many rare forms, one of the displays showing a considerable quantity of native quicksilver.

Texas oils are arranged in an interesting and instructive manner, and there are analyses and logs of wells. Indeed, one of the chief features of value in the entire exhibit is the comprehensive system of analyses. Thus in the exhaustive exhibit of clays, prepared by Dr. Heinrich Ries of Cornell University, and one of the foremost clay men of the country, a fire test and physical analysis accompany each specimen. All the building stones also have analyses, and coal sections accompany the specimens of coal and lignite shown.

There are here several specimens of rare minerals which have radio-active properties and are used by the Nernst lamp people. They come from the Barringer Hill property, in Llano county, and though Colorado has a number of such deposits and there are some in other States, the Texas deposits are among the best.

Many of the products here shown have no commercial development whatever, and as in agriculture, horticulture, forestry and every other line, vastly more remains to be done than has yet been accomplished. Altogether, the Texas exhibit is almost as much a display of possibilities as of achievements, and surveying the field and taking due note of the future, as well as of the present, one must needs echo the familiar refrain, great, indeed, is Texas.

ALBERT PHENIS.

Pig-Iron Market.

Matthew Addy & Co.'s weekly report says:

"There is decidedly more inquiry for pig-iron than there has been for some time, and this is the most encouraging feature of the market. When the last great buying movement took place no iron was sold for shipment beyond July 1. So as matters are now the furnaces have order-books fairly well filled through June, while

the consumers are generally covered for that month, but have nothing bought for later delivery. And as you cannot buy pig-iron one day and have it delivered the next, consumers must soon, that is, if they intend to continue in business, go into the market for the iron they will be needing July and later. The inquiries which are now being made are almost entirely for shipment over the second quarter, though a few have been for the last half of the year. Prices are about where they were a week ago. An attempt has been made, and is still being made, to force the furnaces down to \$9 for No. 2 f. o. b. Birmingham, but up to date this attempt has signally failed, as the leading furnace interests are holding at \$9.50."

EXPORT ORDER FOR IRON.

A Development of the Week in the Market at Birmingham.

[Special Cor. Manufacturers' Record.]

Birmingham, Ala., May 30.

The dullness that has characterized the iron market of late was the main feature during the week just closed. There was hardly enough business concluded to establish quotations. The most of the limited business transacted was, as has been the case right along for some time, for prompt and nearby delivery. There were a few sales made for delivery during the third quarter based on \$9.50 for No. 2 foundry, but they were of no moment.

In a very limited way some sales of No. 1 foundry were made at \$10.25. A few sporadic sales of No. 2 foundry were made at \$9.75, but in number and in volume they were insignificant. The conclusion from the information that can be obtained strongly points to the fact that the most of the business concluded was on the basis of \$9.50 and down to \$9.25. The latter price was accepted in some instances after the refusal of buyer to accept the higher quotation. There is more or less gossip concerning sales and prices, and from one source in close touch with the market the assertion is made that desirable orders can be placed at as low as \$9 for No. 2 foundry. No one will admit making sales as low as that, but in the present condition of the market such sales need not excite surprise. While the quotation for No. 3 foundry is given at \$9, that figure can be shaded probably as low as \$8.50, but only for limited amount. For No. 4 foundry and gray forge the price runs from \$8 to \$8.25, and we can add that the buyer who gets either of these grades at the inside can bless his luck, for both are in very limited supply.

Basic iron is following the course of the other grades, and is held close to the price of No. 2 foundry. The demand for this grade is simply nominal. At the close of the week there was apparently a better inquiry, but it resulted in no business. Opinion as to the course of the market, even among the sellers, is divided.

While this report represents the condition of the domestic market, a piece of most encouraging news comes to your correspondent from the leading interest, to the effect that they had placed an export order for several hundred tons, and that the only thing in the way of placing several thousand tons was the difficulty of obtaining ocean room. Your correspondent could obtain no information as to its destination, nor could he find out anything more about it than is stated above; not even the amount of the tonnage. As to the price, these export orders are, as a rule, "private terms," but the information vouchsafed in this case is that it was better than the domestic market would pay. There has been more or less figuring of late as to export business, but this is the first successful effort reported to conclude any business.

The reports current as to the action of

the Northern furnaces concerning the decrease of production is received with a good deal of satisfaction. The Southern output has already been decreased by the shutting down of furnaces, and a few more may yet go out of commission. It will take a material advance of present prices to tempt those furnaces now out of blast to resume operations.

The report of the committee to examine the properties of certain furnace interests that are considering a merger has reached a conclusion, and will probably be delivered to the parties in interest this week. In time it will be made public. Information is jealously guarded now, and not a hint as to conclusions is allowed to percolate from it.

The pipe works are now reporting the activity that has been a feature of their business. New business is slow now, but they are filled up for some time to come on business already accepted. The various shops, as a rule, report a slow time on new business, and all of them are not running with full force. The activity of last year shows signs of abatement. This should not be a matter of surprise. But local interests are adding to their plants and increasing their capacity. The Woodward Iron Co. has asked for bids for the erection of 300 coke ovens made necessary by the erection of its new furnace, and is adding to the efficiency and capacity of its plant in other ways. There is no check in the improvements going on, and they are not limited to the environs of the city. They pervade the entire district, and as a rule they are substantial and of a permanent character. No sooner is one well under way than another comes to the front. If these be evidences of prosperity, we are enjoying our full share.

J. M. K.

BUILDING IN MEXICO.

Iron, Cement and Other Constructive Material to Be in Demand.

[Special Cor. Manufacturers' Record.]
City of Mexico, May 30.

There will be an increased demand for constructive material in the form of iron, cement and ornamental stone work in the City of Mexico in the near future. The demand for this class of material has already been in excess of the supply, but owing to the recent action of the government in issuing a mandate calling for more vigorous operations in the work of building the National Palace and several other large government structures, progress on which for one reason or other has been delayed, the need for these materials will be more urgent.

The Stock Exchange which is projected for the Mexican capital, together with a number of other important buildings, all intended to be of imposing architectural beauty and stability, will further emphasize the situation.

The demand for electrical equipment in every capacity in which the electric current can be used is also increasing as the resources of the country are developed.

Regarding mining equipment a similar condition prevails, while several of the Mexican States, particularly Oaxaca, give promise of unusually increased activity in this respect. By way of illustrating the demand for American mining equipment, including a general line of machinery, and the possibility of developments in this respect, it is worthy of note that a supply house backed by American capital which commenced business in this city a few years ago has doubled its volume of business several times, its annual trading being represented by millions of dollars. Everything this concern handles is imported from the United States.

Referring to electrical equipment, especially for traction purposes, it is assured that for many years American makes will

be in increasing demand. To that may be added rolling stock, especially passenger cars, of which, owing to their admirable make and adaptability to Mexican needs, the United States has deservedly a monopoly. There are at this time two Mexican cities, Puebla and Guadalajara, each having a population exceeding 100,000 people, that have decided to install a complete and up-to-date electric street-car system, not only covering the respective municipal areas, but also extensions to the many neighboring and suburban centers. To the foregoing may be added a number of other cities, such as Vera Cruz, San Luis Potosi, which have also concluded to abolish the mule for traction purposes and substitute therefor electricity.

In the matter of steam railroad equipment, locomotives, passenger and freight cars, the many new lines projected and branch connections to those already in operation, together with the unceasing agitation created by residents of mining and agricultural regions for railroad facilities, would indicate that in this respect, too, the United States will enjoy for an indefinite period a monopoly in the sale of same to the Mexican republic. While the Mexican is an apt imitator, and readily picks up many useful and practical technical points from the inventive American, to be subsequently utilized to the disadvantage of the latter, viewed from a trading standpoint, it may be assumed with safety that in the manufacture of locomotives, steam and electric railroad rolling stock the field will be left undisputed to American builders and exporters. An attempt was recently made to form a company for the building of locomotives and rolling stock, the idea originating with an American, but prospective stockholders after reflection decided there were several reasons why an establishment of the kind would not prove a paying investment in Mexico.

The extraordinary increase in the cultivation of the ramie plant in Yucatan and other Mexican States, which fiber proves excellent material in the manufacture of bagging, and the evident intention of Mexican capitalists to manufacture this latter as preferable to exporting the crude material to the United States and England, for which in these countries there is a great demand, would also indicate that for American manufacturers of this class of machinery there should be a large volume of business. It is worthy of note that England and Germany are shipping jute and bagging machinery to Mexico in increasing quantities, the records showing scarcely an importation of American make.

Regarding sugar, rice and other lines of machinery, such as that required for ice and cold storage, it is reasonable to suppose that these various industrial products will continue to be imported into Mexico indefinitely, which, in other words, means that the day is remote when equipment of this nature will be manufactured in Mexico.

While it can hardly be said that the same statement applies to shipbuilding, as there already exists a small dry-dock for this purpose at a Southern Mexican port, it is nevertheless certain that the need of small steamboats for freight and passenger service on the navigable rivers as the country develops will, like railroad equipment, become more urgent. Small craft of this character is shipped from England and Germany in sections, and there can be no doubt that if American shipbuilders were as alert as those of the countries referred to they would be rewarded with a goodly share of the business.

The Mexican purchaser looks upon the United States as the natural market for the obtaining of his supplies, and under normal conditions to the United States his

trade is diverted. It is certain, however, that much of this trade is lost to the American exporter, owing to his failure to adopt the methods systematically pursued by the European exporter. With the American agent or representative on the ground, his chances of securing business as compared with European competitors are better. This applies especially to machinery and mechanical devices particularly. In the matter of perfumery, soaps and edible products, as well as in artistic articles, European nations excel.

An influential Mexican was heard to say the other day: "We prefer to purchase our literature and fine manufactured products from France and our machinery from the United States."

WEST POINT ALERT.

The Mississippi City's Advantages for Manufacturing.

[Special Cor. Manufacturers' Record.]
West Point, Miss., May 27.

I have heard of West Point all my life as a proud old Southern city with beautiful homes, fine schools and refined society, as the best place in the country to enjoy life and raise children and flowers, but I have found material here today to add another and interesting chapter to West Point's story.

I mean a chapter on West Point as a modern progressive business city and commercial center. West Point, proud old city, has caught the spirit of the times and is moving with the industrial and commercial progress of the South. There is no better place in the State for industrial development than this city. It is surrounded by splendid supplies of raw material, such as cotton, clays, pine and all sorts of hardwoods, and has the benefits afforded by two great railroad systems, the Southern and the Yazoo & Mississippi Valley. It is the center of a rich farming section, and its markets and trade compare with any city of similar size. A special attraction is its climatic and health conditions. It is located on a high rolling plateau covered with great groves of giant oaks, and with its climate, social and educational advantages a more desirable place to live would be hard to find. Another special feature that strikes a stranger here is that both living expenses and property are comparatively very low, and this, of course, means much to a manufacturing town where necessarily a great deal of cheap labor has to be employed.

To inaugurate and carry on an intelligent and systematic development campaign the leading business men of the city have organized a Board of Trade and placed it on a substantial business basis. Mr. H. S. Dodenhoff, an active and thoroughly competent business man, has been secured as secretary, and West Point will be heard from within the next year in a most gratifying way.

LEE J. LANGLEY.

Greenwood Wants Factories.

The Greenwood Board of Trade, in its efforts to bring to the notice of the world the marvelous resources and advantages of the famous Yazoo Delta, and to attract to that thriving city and to the adjacent country a share of the vast immigration which has for the past few years been setting Southward with such resistless force, is setting an example that might well be emulated by other Southern cities and towns.

Nature has set her seal on the South and has given to that section the name of "the garden spot of the world." The soil in the Delta is said by experts to be more fertile than the famous valley of the Nile; the climate is mild and salubrious; the season is long and pleasant, and all conditions unite to make it an ideal region, where nature does most of the work, only required to be guided by the intelligent

hand of man and a minimum amount of labor to produce an abundant harvest.

In the heart of this great region lies Greenwood, Miss., and it is in this section where the largest acreage and the finest grades of cotton are grown, the quality being of such high grade as to have a specially quoted value in European markets.

The corn crops are enormous. Oats, wheat and rye are always good crops, and a failure of crops is never known. A point well worthy of mention also is that fertilizers are unknown in the Yazoo Delta.

Greenwood is a city of about 5000 people, with five banks with a combined capital of \$750,000 and over \$1,500,000 on deposit. It has about 20 large manufacturing concerns, fine schools, churches, opera-house, secret societies and all the elements that go to make a delightful place in which to live.

Yet it wants more factories, and is offering exceptional inducements to such as may come, such as free sites, immunity from taxation for a number of years, plenty of raw material, artesian water, nearby market. Information will be cheerfully furnished by the Greenwood Board of Trade, Sam. R. Weems, secretary-treasurer.

PROTECTION AGAINST FIRE.

Mr. Edward Atkinson's Lessons From the Baltimore Conflagration.

One of the most interesting reports, from a technical standpoint, upon the Baltimore fire is that made by Prof. Charles L. Norton, in charge of the insurance engineering experiment station at Boston, of which Mr. Edward Atkinson is director. The latter, in a review of the report, added to observations of his own, says that the first lesson taught by the fire is for the underwriter to expunge the word fireproof from his dictionary. On this point he says:

"The general conclusion which may therefore be derived from this conflagration and from other investigations is that as yet no fireproof building has been constructed for general purposes, either as shops, warehouses, hotels, office buildings or other purposes; nor will there be such a fireproof building so long as combustible materials are used within for the finish and flooring of the building, or, perhaps, so long as combustible material is used within for desks, tables, shelves, chairs and other furniture. It is hopeful to know that there are now numerous types of metal-clad or incombustible material for inside finish quite as ornamental as any kinds of wood, many of them much less costly, and that office furniture of incombustible material is being made on a large scale. It is perfectly conceivable that a practically fireproof office building may be constructed and so occupied as to be proof against fire generated within, or even against a conflagration without. The window spaces and wall spaces of an office building may be so planned that fire-resistant shutters may be recessed between an inner and outer wall at the side of each window without affecting the stability of the construction, these sliding shutters closing the window spaces automatically when tripped or set in motion by a fusible link exposed upon the outside of the wall between the windows.

"If these windows, fewer in number than are of late provided in office and other buildings, are glazed in the upper sash only with ribbed or maze glass for the diffusion of light, the rooms will have more effective light than is or can be provided from the larger area of plain glass commonly provided.

"The danger which seems to be least considered in the planning of office buildings, department stores and the like is the open stairway, the open hallway, the open elevator and other flues pervading the

building from top to bottom. In factory practice the vertical hazard is regarded now as a greater danger than the hazard of large areas. The large areas necessary in the conduct especially of textile work, sometimes of several acres, often of one acre on one floor, may be sufficiently well guarded by automatic sprinklers to be considered very safe; but the condition in these rooms is wholly different from that of the department store. In the factory a small quantity of very combustible material is spread over the machines away from the walls under such conditions that the water from the sprinklers can cover nearly every point where fire can exist or spread, other precautions being taken in the few instances where a fire may lurk in the hollow space within the machine. It follows that in all but one instance in our practice water from the sprinklers has overleaped the fire and has held it until the mill fire departments have extinguished it with relatively very small loss. In only one instance has a fire gone over the stock faster than the sprinklers held it, leading to a considerable loss, but in that instance the cause was probably due to the natural effort of the fire department to put on water from the pumps and hydrants a little too soon, drawing water away from the sprinkler service.

"It will be observed that a large building protected by automatic sprinklers both within and without suffered very little, and was doubtless protected in large measure by these safeguards. This immunity from loss may doubtless be in part credited to the sprinkler protection. It would have been wholly credited had not the wind changed at a critical time, turning aside the extreme danger to which this building would otherwise have been subjected.

"This qualification is given simply as a caution. An automatic sprinkler system is the most valuable auxiliary ever invented and applied to the prevention of loss by fire. Yet it must be deemed an auxiliary only, and must not be considered a substitute for complete protection by powerful steam fire engines, fixed or movable, hydrants and hose streams with adequate supplies of water. In our factory system two sources of a full supply of water are made the condition of insuring the risk. Yet more: No system of safeguards for the prevention of loss by fire can be considered in any sense adequate or complete in which large supplies of water are not carried to hydrants upon roofs or to hydrants within high buildings, from which vantage-points fires in lower buildings may be promptly flooded."

In conclusion Mr. Atkinson says:

"When the large city buildings are planned with the slightest consideration to their own safety from internal hazard, and with full consideration of the danger of the neighborhood, they may not only be made safe in themselves, but may be made the standing places for resisting the spread of conflagrations around them in the most effectual manner, and when steel frames are imbedded in Portland cement concrete, that will not only resist fire, but prevent corrosion, they may become permanent safeguards in every city where many of them now constitute a constant menace.

"If the real lesson taught by the Baltimore conflagration shall lead that city to provide a complete system of water supply, if possible, not only from reservoirs, but also from the water side; if the height of buildings is suitably limited not only for purposes of safety, but to maintain the right of light and air in every neighborhood; if roof hydrants and other adequate supplies of water at vantage-points are distributed, then in a very few years Baltimore will have gained immensely in its position at a cost of the private and in-

surance losses of the present time, and will set a lesson to other cities which has ever been only half-learned or not learned at all.

"A conflagration in Baltimore or elsewhere had long been foreseen. Plans, estimates and methods of meeting this hazard were prepared by the undersigned and his associates in 1884. The calamity in the Iroquois Theater was foreseen, and right methods of providing against it were also printed in detail in these documents, which then and since have had a wide circulation. It, however, seems to require a Chicago calamity and a Baltimore conflagration to force the attention of citizens and of the authorities to take the simple, plain and adequate measures for the prevention of these disasters."

SELF-RELIANCE IN EDUCATION.

Keynote of Opposition to Blairism
Sounded in Louisiana's Assembly.

Upon his return from the Conference for Education in the South at Birmingham Dr. Edwin A. Alderman, president of Tulane University at New Orleans, and described as being in charge of the educational campaign in Louisiana and Mississippi, expressed himself strongly in favor of the reviving scheme for federal aid to the common schools. A few days later, upon the assembling of the general assembly of Louisiana, Representative Frank T. Echezalab offered as house concurrent resolution No 2 the following:

"Whereas, there have appeared in different parts of the United States advocates of federal assistance or control of the education of the children of the several States;

"Whereas, the State of Louisiana is steadily and rapidly progressing in educational matters;

"Whereas, the people of the State of Louisiana are fully competent and anxious to cope with the educational requirements that present themselves from time to time;

"Whereas, there is a spirit abroad throughout the State, reaching the remotest sections, to sacrifice all less important matters for the cause of education; and

"Whereas, federal assistance or control of the education of the children of this State would create political disturbances and social upheavals; therefore be it

"Resolved by the general assembly of the State of Louisiana, That federal assistance or control of the education of the children of this State is viewed with extreme disfavor and apprehension; that the federal government does not possess the right to interfere with the educational system of a State, nor to impose the principles and ideals pursued by the people of one part of the nation upon another, which would follow as an inevitable consequence if the State of Louisiana accepts or permits federal assistance or control of the education of our children."

At the request of the Manufacturers' Record Representative Echezalab has written in explanation of his resolution as follows:

"In introducing the resolution I did not intend to create the impression that my constituents or myself are in the least radical or inimical to the harmony and perpetual union of the States, or inclined to revive the memory of those unfortunate events that shook the foundation of the republic. Viewed in the light of reason and patriotism, this assertion appears to be out of time and place. But the propriety of this expression is made apparent when we consider that the advocates of federal interference with the educational affairs of the different States will argue that our opposition originates in local animosities and sectional hatred. Nothing could be more foreign to our motive. We

appreciate the blessings conferred by the federal Union, and earnestly pray that the Almighty will forever preserve us a united people, striving for the general welfare of the country and ever willing to sacrifice home and all we hold most sacred for the perpetuation of the Union.

"The reins of our national government are always in the hands of a political party. The party in power is ever anxious to continue managing the affairs of the country. Is it not reasonable to believe that with the establishment of federal aid or control of the educational matters of the different States the dominant party would do all within its power to introduce such methods and textbooks in our public schools as would mold the impressionable minds of our children so as to plant within their young, unsuspecting bosoms dislikes and aversions to the ideals and history of their respective States? No matter what party may be in power, the same results in this respect would follow. I am a democrat, but even if the democratic party were at present in national ascendancy would I strongly oppose federal interference with the educational systems of the different States. I oppose federal aid not as a democrat, not as a Southerner, but as an American citizen.

"The republican party is now in full possession of the machinery of our national government. Permit the federal government to interfere with the educational affairs of the States, and you will soon find the emissaries of the republican party in control of our public schools, inculcating to our children false impressions.

"Furthermore, federal interference would bring with it lamentable racial agitations. Every State has laws of its own, peculiar to the character of its own people, relative to the elimination of the negro from politics. Educational qualifications respecting suffrage have disfranchised the negro. He is no longer a factor in the politics of the Southern States. Since his disfranchisement the negro has become a better element. From dreams of acquiring political power and supremacy he has been turned to more advantageous and profitable pursuits. He is no longer the prey or victim of political demagogues and tricksters, and we grant him protection of life and property on an equal basis with the rest of our citizenry. As long as the negro remains out of politics he will prosper and live at peace under the same government with the white people, but let the federal government, under the direction of the republican party, obtain the total or partial control of our public schools, then the negro will once more become an obnoxious and dangerous element in our government. The agents of the republican party would lose no time in reviving in the negro the wild dreams of social and political equality. Instead of the negro being educated along manual and industrial lines in accordance with the policy and demands of conditions existing in the Southern States, he would then receive that form of literary education that would render him worthless to himself, a disturbing element in our State affairs, and a constant menace to our peace and prosperity."

The resolution of Representative Echezalab voices the opinion of the self-respecting and self-reliant Americanism. It should be promptly adopted by the Louisiana general assembly and by the legislative body of every State in the country as a basis for a campaign against a frenzy which has seized very many estimable persons who in other respects ought to be qualified to be held as especially intelligent.

The Continental Bank & Trust Co. of Anna, Texas, is reported organized to begin business immediately.

FOREIGN TRADE

Trade With Cuba.

Laine & De Pool of Havana, Cuba, write to the Manufacturers' Record as follows:

"Business in Cuba has increased so much, and is bound to increase more with the States, that wide-awake manufacturers are having agents in the island to treat direct with buyers instead of having their articles pass through the hands of seaport commission merchants. The facilities for direct shipments, the ease for collecting by means of existing foreign banks and national, and of finding out the commercial rating of the important houses of the island have induced American shippers to do business direct with their clients through appointed agents in this city. The advantage that they have in having a permanent agent in the island is the saving of expenses, as an American agent sent on an errand without knowing the language or the habits of the people will spend lots of money and not be in the island in the right time to make a sale. As you undoubtedly know, in these tropical countries they buy according to the crop; that is, in time of sugar-cutting on one side and in time of tobacco-curing on the other. That there are fair horizons ahead for Cuba there is no doubt, as you can see by the surplus of \$5,000,000 in the treasury in two years of existence as a republic, and the money that will soon be paid to the soldiers and that will sooner or later find its way in the channels of commerce.

"Besides that, the fruit-growing industry is taking such a large proportion that in a couple of years the place that will furnish the States with its vegetables in winter will be Cuba. Agricultural-imple-ment manufacturers have a great future for their business in the island, as the American plow is taking slowly the place of the clumsy native wooden plow, but they must not think that any importer will be willing to spend their money on implements to push the business of a firm. If they wish to have their goods properly known they have to believe this market the same as the Northern and have their goods brought down and demonstrate the truth of their assertions practically.

"As far as we are concerned, we beg to say that we are willing to represent any manufacturer that on his side is also willing to push his goods in this market on a practical basis. In case that any manufacturer wishes to honor us with their representation, we will give them sufficient and satisfactory references of ourselves, but as we said before, they must not expect anybody to go to expenses to find out whether their goods are fit or not."

Electrical Products in England.

The Electrical Trade Supply, Limited, of Great Charles street, Birmingham, England, writing to the Manufacturers' Record regarding the outlook for the introduction of American electrical products into Great Britain, expresses the belief that immediate requirements can be more than fully met by such large electrical works as the British Westinghouse Company and the British Thomson-Houston Company, and adds:

"This remark applies principally to generators and motors. As for the smaller accessories, the articles in this country differ so largely from those used in installation work in the United States that our experience is that there will be considerable difficulty in getting American manufacturers to standardize to British requirements. Germany, however, sends very large consignments of electrical sundries conforming to our local requirements. And between what we make ourselves and what we get from Germany we are of the opin-

ion that our present necessities are fully met."

Wants Boilers and Radiators.

Joseph Bernasconi of Buenos Ayres, Argentine Republic, writes to the Manufacturers' Record as follows:

"I want 200 pieces radiators, alike, as shown in wood cut on page 59 of catalogue of A. A. Griffing Iron Co., book H, May 9, 1901, with two 'orifices' above and below, one and one-half or two inches, and with a 'right' screw only, so that I can join as many pieces together, upon occasion, as may be necessary. For these articles I will pay 700 'pesos' gold, net, free of expenses—packed and shipped on board at New York. For the boilers in sections of assembled elements. I want three boilers, each of six square metres heating surface, and for use by the low-pressure steam system. These can be of type known as 'Bundy,' page 14, or 'Motts,' page 12, or possibly 'Mercer steam Boilers,' pages 1 to 6. For these three boilers complete I will pay the sum of 300 'pesos,' gold, net, free of all expense, packed and placed on board at New York."

Notes.

Enrique Lozano of Guayaquil, Ecuador, writes to the Manufacturers' Record that he proposes to establish there a bureau of commercial information to be operated for the first six months on a salary basis and thereafter on commission.

P. H. de Juan Barrezneta of Machala, Ecuador, writes to the Manufacturers' Record that he is a planter of cacao, coffee and mangle, and that in exporting his products he almost always brings back their value in foreign goods. To facilitate his business he is getting together a sample department.

J. Sandoval de Fidalgo of No. 152-4 Paseo de San Juan, Barcelona, Spain, writes to the Manufacturers' Record that he desires to represent in Spain American manufacturers. He says that he is a mining engineer, but on account of the backwardness in Spain he is unable to follow his profession, and therefore has gone into commercial traveling.

A \$5,000,000 Coal Company.

Isaac T. Mann of Bramwell, W. Va., in a letter to the Manufacturers' Record says that the Pocahontas Consolidated Company has been chartered with Isaac T. Mann, president; Jenkin Jones, vice-president; James Ellwood Jones, general manager; J. Walter Graybeal, secretary and treasurer. The company has its principal office at Bramwell. Authorized capital is \$5,000,000, one-half of which is 6 per cent. preferred and one-half common stock, all of which has been subscribed and paid. The company has purchased the properties in the Pocahontas coal field formerly owned and operated by the Norfolk Coal & Coke Co., Lick Branch Collieries, Angle Colliery, Delta Colliery, Shamokin Coal & Coke Co., Caswell Creek Coal & Coke Co., Sagamore Coal & Coke Co. and Rolfe Coal & Coke Co. These companies are lessees of the Pocahontas Coal & Coke Co., and control 8500 acres of as good coal lands as there are to be found in the Pocahontas district, with an annual output of 1,000,000 tons of coal. They also own and operate about 1600 coke ovens.

About 2000 men are employed in the limestone quarries lying between Rowlesburg and Buckhorn, in Preston county, West Virginia. The product of the quarries is used principally by the Baltimore & Ohio Railroad for ballast.

It is announced that manganese ore of fine quality has been discovered near Mena, Ark., and that orders have already been given for two carloads per week for the smelter at Rusk, Texas.

RAILROADS

SAVANNAH TO THE GULF.

A New Company Organizing to Build Across Georgia and Florida.

The South Atlantic & Mexican Gulf Railway Co. has applied for incorporation at Savannah, Ga., where its principal offices are to be located. The petitioners for incorporation are Capt. D. G. Purse, D. G. Purse, Jr., John J. McDonough and E. M. Frank of Savannah, P. M. Comas and C. W. Dean of Appling county, F. L. Sweet and John McLean of Coffee county, and W. J. Rogers and J. W. Purdum of Berrien county. Chicago financiers are also reported to be interested.

Captain Purse writes the Manufacturers' Record as follows: "We have progressed with our work most satisfactorily for a new enterprise, and every detail, even to the minutest, will have been covered and provided for before the official family of the road is named. The money for its construction has been at our command for 12 months past."

The capital of the company is to be \$3,000,000, with the privilege of increasing to \$5,000,000, and it is proposed to build a line 325 miles long, starting at Savannah and running southwest to Washington county, Florida, and to a deepwater port on the Gulf of Mexico.

Captain Purse is reported as saying that the road will be built as soon as possible, but that the Gulf terminal has not been decided upon. It should be noted, however, that St. Andrews Bay—towards which one or two other railroad companies are projecting lines—is in Washington county, and may also be the objective point of this line.

The route as declared in the petition will be through the counties of Chatham, Bryan, Liberty, Tattnall, Appling, Coffee, Berrien, Brooks, Thomas and Decatur, in Georgia, and the counties of Leon, Gadsden, Wakulla, Liberty, Franklin, Calhoun and Washington, in Florida.

It is not improbable that the plan to build such a road will result in linking up one or two smaller lines already in existence for the purpose of covering part of the route.

NEW LINES IN ARKANSAS.

Considerable Construction Proposed by Different Companies.

Among the new railroads incorporated during the past week is the Arkansas River & Southern Railway, which proposes to build a line 20 miles long from Redemption, in Perry county, Arkansas, to Maumelle, in Pulaski county, Arkansas. The directors are Gordon N. Peay, T. Guy Bragg and B. Thurston of Little Rock, R. B. Edgar and C. Ketcham of Perry county.

The Rison & Mt. Elba Railway Co. is another Arkansas line that has just been chartered, and which proposes to build a road 12 miles long from Rison to Mt. Elba. The directors are J. I. Porter, A. R. Porter, R. E. Johns, J. F. Swanson and E. W. Farrar.

It is stated that the incorporation of so many short lines recently in Arkansas is because of a desire to participate in the division of the railroad tariffs in accordance with a recent decision of the interstate commerce commission concerning tap lines.

Another bit of construction in Arkansas is proposed by the Cache Valley Railroad Co., which has amended its charter to build a branch 27 miles long from Walnut Ridge to Paragould, crossing the main line at Light.

Concerning the Arkansas Western Railway it is said that the proposed road from Waldron to Hot Springs, 82 miles, will be constructed according to the profile of the Kansas City, Hot Springs & Southeastern

road, which allowed its charter to lapse. J. F. Read is president of the company, and J. H. McDonough is secretary and treasurer.

The St. Louis, Little Rock & Gulf Railroad Co. is reported to have completed its survey from Little Rock to Sheridan, Ark., and to have begun a survey south from Sheridan. President H. S. Shaner, Chief Engineer H. H. Fielder and H. C. Shaner, superintendent of construction, are reported to be making a general inspection of the proposed line, and it is stated that upon their return to Little Rock construction contracts will be let and work begun. A grading outfit has been ordered. Northern capitalists are said to be financing the project.

IN ZINC TERRITORY.

White River Line Will Aid in Developing Much Mineral Land.

On the White River branch of the Missouri Pacific system, a new line which will prove to be of considerable value in developing the zinc mines of Arkansas and Missouri, construction is being actively pushed between Cotter, Ark., and Aurora, Mo. The entire line will run from Newport, Ark., to Carthage, Mo., and between Newport and Cotter, 123 miles are now in operation and track is reported laid from Carthage, Mo., eastward to Aurora, 38 miles.

The uncompleted portion of the road between Aurora and Cotter is 106 miles long. On it there are several tunnels, one of these being at Omaha, in the northern part of Boone county, Arkansas. This tunnel is 2400 feet long, and a couple of miles westward is another 3400 feet long, while just across the Missouri line will be bored a third tunnel 2900 feet long. One tunnel 1100 feet long is on that part of the line now in operation between Newport and Cotter.

Besides being in convenient reach of an important part of the zinc-mining territory, the railroad will develop other mineral interests, including lead and copper mines.

The Anderson Traction Co.

The Anderson Traction Co. has been organized at Anderson, S. C., with the following officers: J. A. Brock, president and treasurer; F. G. Brown, vice-president; Dr. Geo. E. Coughlin, general manager; directors, J. A. Brock, Dr. Geo. E. Coughlin, S. M. Orr, J. J. Fretwell, R. S. Hill, B. F. Mauldin, R. E. Ligion, G. A. Ledbetter, Fred G. Brown, W. F. Cox, D. P. McBrayer and C. S. Sullivan. The officers are also the executive committee.

Dr. Coughlin is the gentleman who projected and who proposes to build an electric railway to connect Anderson and Greenville. Work is to be begun very soon in Anderson, it being stated after the directors' meeting that construction would start as soon as material could be procured and hands employed. Ties and poles have been ordered. It has been decided to build a line from the courthouse in Anderson down Main street to the city limits and probably to the Orr Mills. Surveys will be made from Main street to Riverside, and also to the Brogan Mill. Another line will be surveyed up Main street and Greenville street. The executive committee has been authorized to place orders for material. It is expected that the Anderson part of the line will be in operation in three or four months.

Perla Northern Railroad.

Mr. R. W. Griswold, vice-president and auditor of the Perla Northern Railroad Co., 1605 Chemical Building, St. Louis, writes the Manufacturers' Record as follows:

"The Perla Northern will be built from Perla, Ark., a point on the Iron Mountain

Railway 38 miles below Little Rock; will run northwest, crossing the Hot Springs line of the Choctaw, Oklahoma & Gulf near Butterfield, Ark., and the Little Rock, Hot Springs & Western at Lonsdale, Ark. The length as now planned will be about 22 miles, and the northwest terminus will be Whittington, in Garland county. The road is primarily for the transportation of logs and lumber on account of the Malvern Lumber Co., whose plant is located at Perla, but a general traffic business will be built up. There are no north and south lines in the territory penetrated by our line. As yet we have no engineer. The construction will not be contracted, but will be done by day labor. The equipment necessary for the present business will be acquired from another line belonging to the Malvern Lumber Co., though we shall probably buy further equipment at an early date."

Important Street Railway.

Advices from Richmond, Va., state that the Citizens' Rapid Transit Co. has completed preparations to complete its proposed line, which is to run from Brook avenue to Fulton, and the construction of which includes a paved viaduct 2300 feet long and 42 feet wide. This viaduct will be constructed of steel, and the contract for it has lately been awarded. Contracts for the building of the remainder of the line are also said to have been given out and material has been purchased. Construction will begin within 10 days, and the line may be completed by the middle of October. The cost is estimated at \$600,000. John C. Robertson is president.

Reaches a Number of Mines.

A report from Birmingham says that one of the highest wooden trestles in this country has been completed on the Cane Creek branch of the Northern Alabama Railway, Louisville & Nashville system. This bridge is 115 feet high and 720 feet long. The road branches from the main line seven miles north of Birmingham, and runs west into a coal-mining country, there being about 25 or 30 openings on the line. The Cain Creek branch is 17½ miles long.

Beaumont & Sour Lake.

President G. W. Meeker of the Beaumont & Sour Lake Railroad is reported as saying that the resumption of construction on the line is the result of arrangements made during his recent visit to Columbus, Ohio, to provide funds to complete the line to Sour Lake. Arrangements have been made with the Gulf & Interstate Railroad to use its terminal in Beaumont. The line will be operated by steam instead of by electricity, as was at first proposed.

Atlantic & North Carolina.

Capt. Thomas D. Meares of Wilmington, N. C., has been appointed receiver for the Atlantic & North Carolina Railroad, and S. G. Ryan has been appointed special master to take evidence and report on July 1 concerning the condition of the road, which is controlled by the State of North Carolina. Judge Purnell, who appointed the receiver, announces that if an acceptable offer to lease the road is received he may vacate the receivership.

Louisiana Sugar Belt.

G. R. Turner, president of the Louisiana Sugar Belt Railway, New Orleans, is reported as saying that the line is to be completed by October 15. Construction is under way from Thibodaux south 40 miles to a point three and one-half miles south of Cutoff, at which point the terminal is to be. The possibility of extending the line to Grand Isle, 30 miles, is under consideration. This road is to be of standard gauge, with 60-pound steel rails.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

ENEMY OF THE BOLL-WEEVIL.

Has a Destroyer Been Found in a Red Ant in Texas?

[Special Telegram Manufacturers' Record.]
San Antonio, Texas, June 1.

A species of ant which does all that is claimed for the Guatemala ant, and even more, has been discovered in Bexar county, and it is thought that it can be multiplied in sufficient numbers to become an important factor in the salvation of the cotton crop from the boll-weevil.

Jose Cassiano, ex-county collector, who has several hundred acres of cotton in this county, has these ants in his fields. He says that a month ago his fields were alive with weevils, but now he has not a live weevil in his patch, the plants being covered with little red ants and the ground strewn with dead weevils. The ants, said Mr. Cassiano, seemed to have completed the slaughter and were carrying off the cotton pest by the thousands. He says that the saviors of his crop seem to be the ordinary red ants, but he is not an entomologist, and does not know how to classify them.

State Senator Marshall Hicks is also authority for the effectiveness of the ants in Mr. Cassiano's fields.

Charles Westerlind, a well-known mechanical engineer of this city, is experimenting with ants. He finds that the ordinary flesh-eating ants kill boll-weevils, but only enough for food. The ant on Cassiano's place is red-brown, five-sixteenths of an inch long, is a tiger among ants, and appears to kill weevils out of pure wantonness.

B. F. BAUGH.

A \$50,000 Knitting Mill.

The Marlboro Cotton Mills (not the Marlboro Manufacturing Co., as erroneously stated last month) will establish a knitting mill. The machinery has been purchased and is now being installed. It will give a daily output of 400 dozen fleece-lined men's underwear, and the company's capital will be increased \$50,000 to provide for the plant. The company operates several yarn mills, from which it will procure the yarn to be knitted. Its knitting plant is located at McColl, S. C., and will begin operations in about a month.

The Cotton Movement.

In his report for May 27 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 270 days of the present season was 9,667,564 bales, a decrease under the same period last year of 659,025 bales; the exports were 5,681,284 bales, a decrease of 738,514 bales; takings by Northern spinners were 1,969,273 bales, a decrease of 13,246; by Southern spinners 1,724,797 bales, an increase of 18,447 bales.

A Press-Cloth Mill.

Last December the Manufacturers' Record reported the organization of the Standard Press Cloth Co. at Marietta, Ga., with a capital stock of \$100,000. The company is now making preparations to build its plant, the product to be camels' hair and mohair, yarns and press cloth. The officers are: President, Moultrie M. Sessions; vice-president, E. J. Powers; secretary, Thomas S. Kenans; and superintendent, A. F. Parker.

To Modernize Plant.

Messrs. R. L. Moss & Co. will modernize the Athens Manufacturing Co. at Athens, Ga., which they purchased last month at \$86,000. They will re-equip by

installing about 10,000 ring spindles and replacing that machinery which is worn out or not modern, probably erecting an addition to the present building. The yarn department will be operated first and weaving will be added later. Water-power is used.

Capital for a Cotton Mill.

Mr. F. M. Runnels, secretary of the Columbus (Miss.) Progressive Union, writes to the Manufacturers' Record:

"We are looking for some parties with \$100,000 capital to place against \$50,000 local capital in a cotton mill."

Textile Notes.

The Southern Embroidery Co., Andrew G. Steelman, 668 W. Baltimore street, Baltimore, Md., has purchased site for the establishment of an embroidery factory. A three-story brick building 25x220 feet will be erected to accommodate the machinery.

The Georgia Industrial Association, which includes 150 cotton manufacturers in its membership, is to meet next week at Warm Springs, and it is expected that the questions of labor, immigration and the Panama canal will be the principal ones discussed.

The Crescent Manufacturing Co. of Spartanburg, S. C., will establish a knitting mill. It has awarded contracts for the erection of the necessary buildings. Plans and specifications for the plant are being furnished by Messrs. C. R. Makepeace & Co. of Providence, R. I.

The dispatches of several weeks ago regarding the fire damage to the Manetta Mills of Lando, S. C., were much exaggerated. The company's building was damaged slightly and some of the machinery was damaged by water. However, the equipment has been overhauled and is in operation. There are 1800 producing spindles and 120 wide looms.

It is reported that Messrs. William McKearn of Philadelphia, Pa., and J. E. McLaughlin of Troy, N. C., will establish a knitting mill at Tennille, Ga. They have been seeking site in the South for such an enterprise, and have offered to invest \$15,000 at Tennille, provided local investors will subscribe a like amount to the stock of the company it is proposed to organize.

Spray (N. C.) Woolen Mills, recently mentioned as probably to add looms, has installed 26 broad looms, increasing its equipment to 50 broad looms. This machinery is being operated overtime in order to fill contracts, the daily output being 500 pairs of blankets. The company will build a 200-foot one-story addition to its present building, providing additional space for office, packing and inspecting rooms and shipping department.

QUOTATIONS OF COTTON YARNS.

By Paulson, Linkroom & Co., New York, Philadelphia and Chicago, May 31.

No. 10s-1 and 12s-1 warps.....	17½ @ 18
No. 14s-1 warps.....	18 @—
No. 16s-1 warps.....	18 @ 18½
No. 20s-1 warps.....	18½ @ 19
No. 6s to 10s yarn.....	17½ @ 18
No. 12s-1.....	18 @—
No. 14s-1.....	18 @—
No. 16s-1.....	18½ @—
No. 20s-1.....	18½ @ 19
No. 8s-2 ply soft yarn.....	18 @—
No. 10s-2 ply soft yarn.....	18½ @—
No. 8s-2 ply hard.....	18 @—
No. 10s-2 ply hard.....	18 @—
No. 12s-2 ply hard.....	18 @—
No. 14s-2 ply.....	18 @—
No. 16s-2 ply.....	18½ @—
No. 20s-2 ply.....	19 @—
No. 24s-2 ply.....	19½ @ 20
No. 26s-2 ply.....	20 @ 20½
No. 30s-2 ply yarn.....	20½ @ 21
No. 40s-2 ply.....	24½ @ 25
No. 5s-3, 4 and 5 ply.....	18 @—
No. 20s-2 ply chain warps.....	19 @—
No. 24s-2 ply chain warps.....	20 @—
No. 26s-2 ply chain warps.....	20½ @—
No. 30s-2 ply chain warps.....	21 @ 21½
No. 16s-3 ply hard twist.....	18½ @—
No. 20s-3 ply hard twist.....	19 @—
No. 26s-3 ply hard twist.....	20½ @—

Very dull and weak, with prices nominal.

The Progressive Union of New Orleans has endorsed the plan for a Cuban exposition at Havana in January next.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Wanted in Germany.

There is a growing scarcity of beech and oak timber in Germany, and there will be found an active and permanent demand there for both under certain conditions. Beech is wanted especially for two purposes—as railway ties and as staves and headings for butter tubs. For this purpose the wood should be knot free and of the best quality. The oak timber specially in demand is the clean, high quality in squared logs suitable to be sawed up into lumber of various sizes and forms for the manufacture of furniture, especially office desks, file cases, book racks, etc., which are now fully adopted and very generally used in Germany. For several years past there has been an important trade in these articles from the United States, whereby they became widely known and appreciated. But finished furniture is not only bulky and expensive as ocean freight, but bears a relatively high rate of duty, whereas logs and dressed lumber are either free or bear only a nominal duty. The maximum economy is attained when oak and other hardwoods are imported in the form of dressed or squared logs, which are sawn into the required forms, seasoned and made into furniture or used for flooring and other purposes. The fine high-grained quality of oak wood is worth in the German market \$42.84 per cubic meter (35.314 cubic feet), while oak of ordinary quality is worth but \$19, and the freight and duty on both grades are the same.

Consul-General Frank H. Mason of Berlin, Germany, who reports such opportunities, also writes:

"Among the American products for which there is now a demand in Germany are gang-saw mills of the sash model, with steel frames and adapted to steam power. They should be of a size capable of working logs, round or squared, up to 24 or 30 inches diameter. If the machine is direct-acting—that is, with the saw sash driven by the reciprocating motion of the engine itself, without the intermediary action of a belt and crank—so much the better. Stationary mills of this kind would, it is thought, meet with a ready sale in North Germany, especially in the district of Lubeck, where vast quantities of logs brought from Scandinavia are worked up into lumber. Portable mills are wanted for use on forest tracts in both North and South Germany, and should be of the dimensions and character above described. Circular saws are relatively little used in Germany except in the smaller diameters for factory purposes."

Crossties for Guatemala.

It is reported from Guatemala that a syndicate headed by Sir William C. Van Horne, who is interested largely in railroad development in Canada and Cuba, has guaranteed the completion in Guatemala of the Guatemala Northern Railroad from El Rancho to Guatemala City, giving all-rail connection from the Atlantic to the Pacific, and that all of the crossties will be purchased in the United States. It is held out that if Louisiana can deliver the ties at satisfactory prices they will be shipped through New Orleans.

For Casing and Capping.

The Electrical Trade Supply, Limited, of Great Charles street, Birmingham, England, writes to the Manufacturers' Record that it desires to get into communication with American lumber companies manufacturing casing and capping. The company says that it deals largely in grooved American white wood casing and capping for electric conductors, and has been get-

ting cargoes direct from the United States, but because of some difficulty as to price and delivery it wishes to find a new buying market.

Pine-Stump Turpentine.

Capt. W. L. Glessner, immigration commissioner of the Georgia Southern & Florida Railroad, after a visit last week to the pine-products plant of the Cordele Manufacturing Co., said that this process of deriving turpentine is a coming industry of South Georgia, in that it cleans up the pine stumps left by the saw-mill men and leaves fields in fine shape for cultivation.

Wants American Staves.

A. M. Cristoffanini of Genoa writes to the Manufacturers' Record that he would like to represent as an agent in Italy American firms exporting staves of the following sizes, 90-95x22, 25, 28 and 30, and also exporters of wooden spools. He says that zinc white interests him not a little.

Thousands of dollars a year are brought into the northern neck of Virginia through the industry of sawing gum logs, which a few years ago were regarded as fit only for firewood.

Oil-Mill Superintendents.

The program for the annual meeting this week at Houston, Texas, of the Oil-Mill Superintendents' Association is as follows: "Technical Education," S. D. Henley, superintendent International Correspondence School, Scranton, Pa.; "Belts," Thos. Bell, Tyler, Texas, and C. W. Thatcher, Willis Point, Texas; "The Proper Care of Belts During the Summer," J. F. Follard, Paris, Texas, and B. C. Newberry, Blossom, Texas; "The Value of the Cottonseed Industry of the South," H. E. Harman, Atlanta, Ga.; "Time Allowed for the Press to Go Up—Its Effect on Press Cloth," S. J. Duke, Pittsburg, Texas, and J. P. Bass, Bryan, Texas; "Friction and Lubrication in Oil Mills," George C. Hascall, president Texas Manufacturing Co., Fort Worth, Texas; "The Use of the Filter Press for Crude Oil," H. J. J. Thiessen, Sherman, Texas, and A. A. Diffey, Kaufman, Texas; "Fertilizer and the Oil Mill," W. B. Bradshaw, Ennis, Texas, and John H. Green, Barlow, Miss.; "The Duty of the Crushing Rolls and Their Relation to the Yield of Oil," Chas. L. Karicofe, Marianna, Ark., and Wm. Bauer, Burton, Texas; "The Heart of the Oil Mill," Edwin Lehman Johnson, Memphis, Tenn.; "The Importance of the Chemical Test for Cake and Oil," R. H. Schumacher, Navasota, Texas; "What Relation Does the Linter Bear to the Huller and Separator?" John Sweeney, Houston, Texas, and H. Wunderlich, Waco, Texas; "Industry, Sobriety and Economy," Geo. T. Parkhouse, Cisco, Texas; "Press Cloth—Its Construction and Uses," Oriental Textile Mills, Houston, Texas; "The Importance of Cleaning Seed," J. W. Roberts, Fort Smith, Ark., and John Drake, New Boston, Texas; "Theory and Practice of Working Meal," G. A. Baumgarten, Schulenburg, Texas, and J. B. Hensley, Beeville, Texas; "The Official Organ—Its Aim and Claim," J. C. Arsdell, with H. W. Caldwell & Co., Chicago, Ill.; "Trials and Tribulations of a Traveling Man," S. L. Dickey, with Young, Heintz & Co., Dallas, Texas.

New phosphate beds are being discovered in the neighborhood of Cornersville, Tenn. The Cornersville Phosphate & Mining Co. has been organized, with \$10,000 capital, and will ship several carloads of the rock for a thorough test of its quality.

The Virginia-Carolina Chemical Co. has voted to increase its preferred stock by \$8,000,000.

MECHANICAL

Pipe, Nipple and Bolt Threading Machines.

The rapidity with which an operation can be performed is always one of the

In the smaller machines the most satisfactory drive (electrically) is the direct-connected variable-speed motor, where the power required does not exceed two horsepower. After this it becomes a point of economy to use the constant-speed motor, and a neat and convenient equipment is

there is very little use for the reversing of the motor except to take off fittings. A special feature of this machine is the flange grippers on the rear jaws, which are used in making up flanges and fittings with the machine. Another illustration represents a 16-inch machine equipped with variable-speed motor direct connected.

These machines are manufactured by the Bignall & Keeler Manufacturing Co., Edwardsville, Ill.

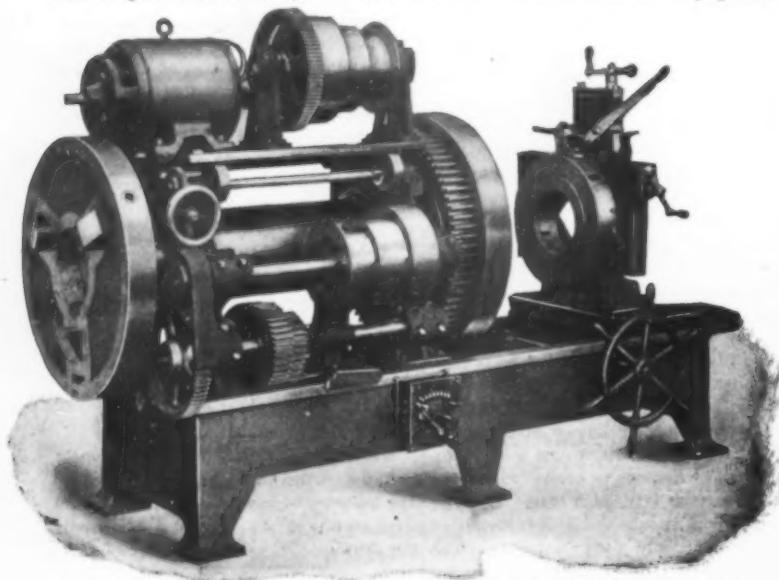
De Laval Steam Turbines in a Philadelphia Power-House.

The Philadelphia Rapid Transit Co. operates in its power-houses at 30th and

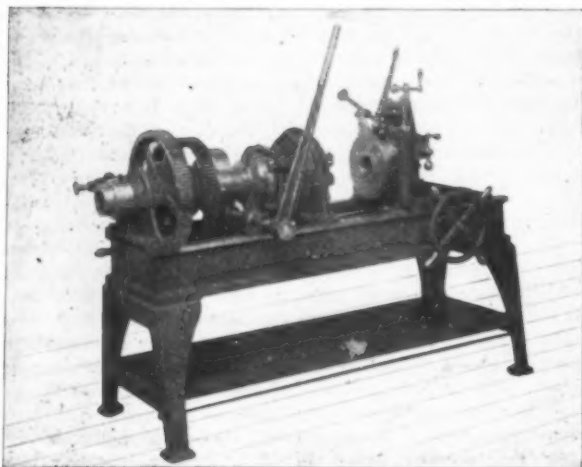
pump cases are then connected so as to deliver their discharge into one main pipe, operating thus in parallel. The De Laval turbines are generally known, but the fact that they can be coupled to centrifugal pumps, forming a high efficiency pumping unit, is not so generally known, although many turbine pumps have been built at the Trenton works of the company.

The design of the pump itself is interesting. The pump runner takes water through the center on both sides, thus keeping it well balanced, and the water is driven out radially through the pump-runner body.

The runner is made of bronze and the bearings are self-oiling. An important



AN EIGHT-INCH THREADER ELECTRICALLY DRIVEN.



COMBINATION PIPE, NIPPLE AND BOLT THREADING MACHINE.

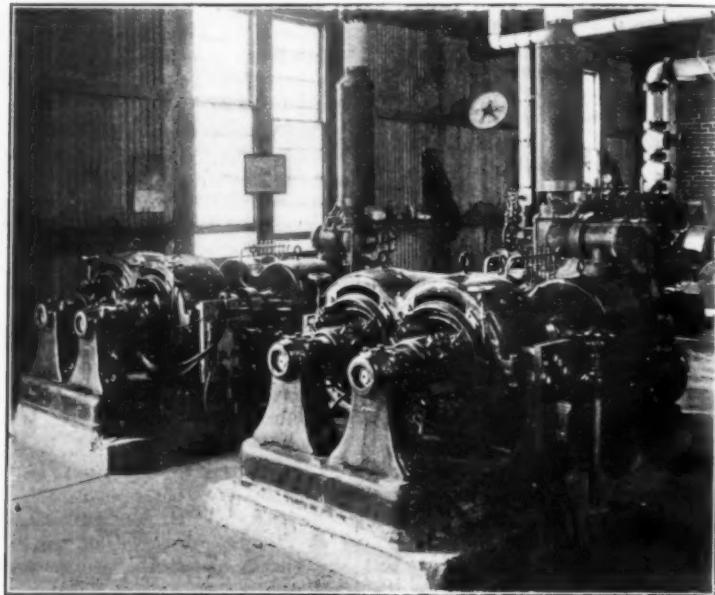
prime factors with the purchaser of a threading machine. An accompanying illustration represents a machine with a lever-chucking device and lever-expanding dies with automatic die release. This is a combination pipe, nipple and bolt threading machine. It has good features—speeds, direct drive, travel of the diehead, steady slides and cutting-off arrangement of the "Peerless Special" pipe and bolt threading machine. It is heavier, and has the lever-gripping chuck, and by placing on the chuck-jaws a sectional nipple-holder the machine becomes one of the most rapid nipple-threading machines made, as there is no screwing in or out of the nipple, and on releasing the holders have a forward movement, so that the nipple is projected out of the holder without touching it. Then, without releasing the hold on the gripping lever, the next nipple is inserted and gripped. In cutting right and left hand nipples the right-hand thread is cut first and the nipple-holders adjusted a little tighter than ordinary, then the left-hand thread can be cut without its unscrewing. The advantages of this machine as an ordinary pipe machine are apparent. There are no delicate parts, as ample stock and proper material have been considered in the design, and while the strains consequent to a lever-gripping machine are considerably greater than the ordinary chucking device, sufficient stock has been allowed to withstand these strains.

illustrated herewith, showing an eight-inch machine with constant-speed motor and a belt drive, the changes of speed being obtained through the shift gears and cone pulley. With the expanding dies

lift of about 45 feet. Each of the pump units consist of a turbine wheel with double-gear shafts, and to each of these shafts is connected, by means of a flexible coupling, a De Laval pump. The two

The efficiency obtained with these pumps was about 75 per cent.

At the 2d street and Wyoming avenue power-house there are installed and operating two 75-kilowatt 110-horse-power De

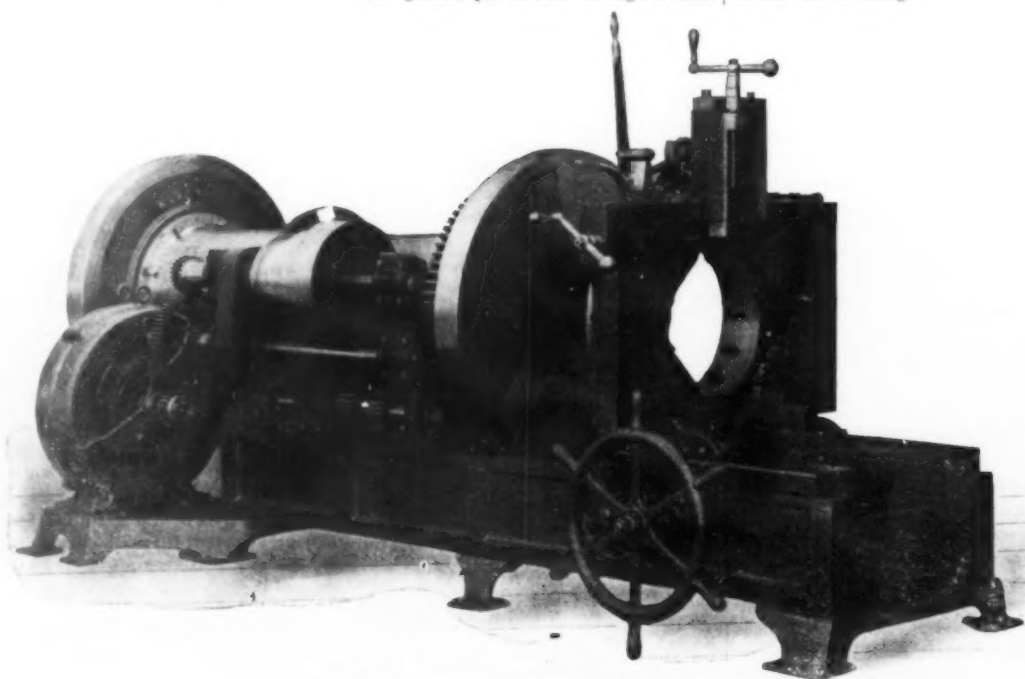


DE LAVAL STEAM TURBINES IN A PHILADELPHIA POWER-HOUSE.

Market streets and at 2d street and Wyoming avenue De Laval Steam Turbine installations, which will be interesting to engineers in general. See accompanying illustration.

In the former power-house there are two turbines direct connected to two De Laval pumps circulating the condensing water in their condenser and cooling tower system. Each of these pumps handles 6000 gallons per minute through a total

point in the design is the separation of the packing from the bearings, and leakage is prevented by utilizing the pressure of the water so as to properly pack the shaft. The pump cases are all made to divide horizontally, and so arranged that the top portion can be lifted off and the interior of the pump fully examined without disturbing the piping or other arrangements. It is a simple matter to replace the top of the case covering.



A 16-INCH BIGNALL & KEELER MACHINE.

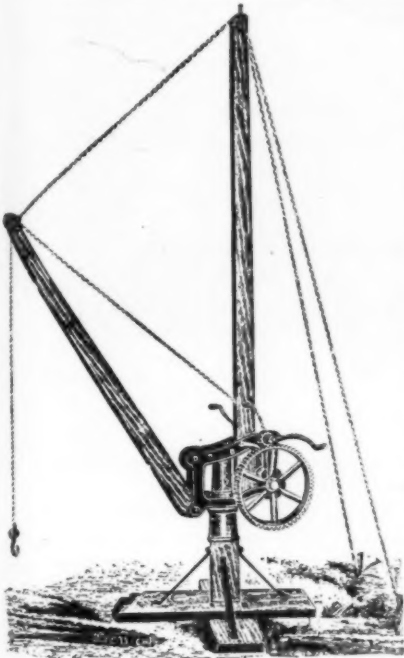
Laval Turbine Generators, furnishing exciting current for several alternating current revolving field generators driven by Corliss engines, and their operation has been so successful that the D'Olier Engineering Co. of Philadelphia, Pa., which furnished all the above turbine machinery, has recently received an order for a third turbine generator to operate in connection with the present ones.

These generators consist of a double-field frame and two armatures for each turbine generator, the armature being connected to operate in parallel, and each turbine generator delivers its current into a common set of bus-bars.

An interesting detail in connection with these machines is a small rotary pump placed on the sub-base of the turbine and driven by a short belt from the shaft coupling. These pumps are used to raise the supply of oil for the engine-room to an elevated central tank, from which oil is supplied to all the machinery.

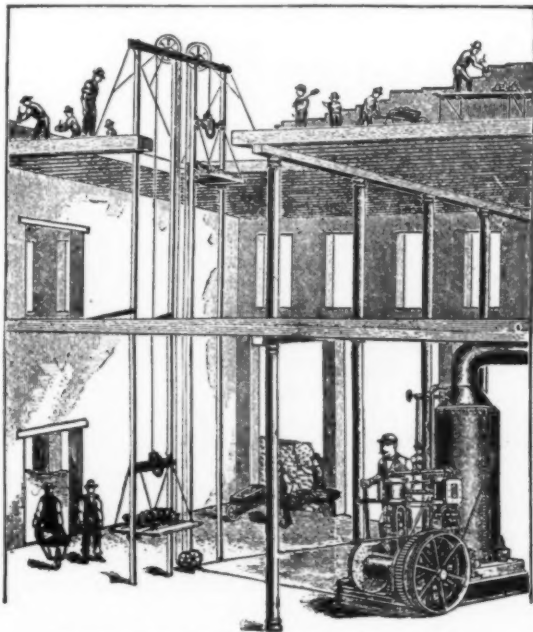
Parker Portable Derrick.

Accompanying illustrations present views of the Parker patent portable der-



PARKER PORTABLE DERRICK.

rick for light work, used extensively to handle concrete building blocks, timbers,



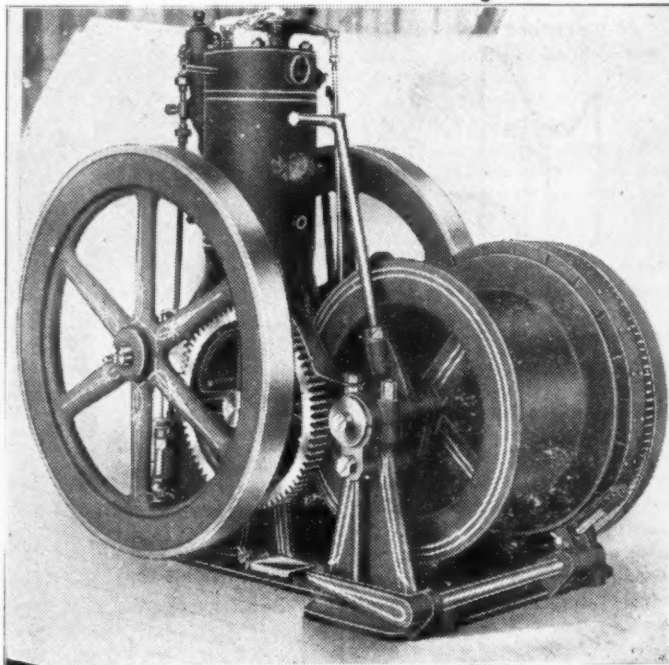
PARKER DERRICK HANDLING MATERIALS.

joists and building materials of all kinds. It is also built on small low flat cars, with flat-faced wheels, for building and

yard use, and with flanged wheels for tracks, to be used in manufacturing plants. A special feature of this derrick is the setting up and taking down the mast to allow it to pass through doors and under wires and other obstructions. Two men can take it down and reset it quickly and easily. The derrick is manufactured by the National Hoist & Machine Co. of Chicago, Ill.

"Blakeslee" Hoisting Rig.

The gasoline engine has in the past 25 years been utilized for a great many purposes, but its ideal sphere seems to be its



"BLAKESLEE" HOISTING RIG.

utilization as a motive power, for hoisting purposes and general contract work. The reason for this is that a builder or contractor naturally desires a power that is easily transported from place to place, easily started and stopped, and one that does not require a licensed engineer to operate it. The White-Blakeslee Manufacturing Co. of Birmingham, Ala., manufactures a gasoline hoisting rig which is represented by the accompanying illustration.

This hoist can be used either in combination with a four, five or six-horse-power

per minute. The drum will hold about 400 feet of three-quarters-inch rope or 1000 feet of three-eighths-inch wire cable. Beside hoisting, the machine can be used to operate elevators, conveyors, derricks, for prospecting, and even for piledriving, with great economy and efficiency.

The friction clutch is carefully made, and provided with a take-up in case of wear, insuring no slipping of the load when in the operation of hoisting. All the gears are machine-cut, practically noiseless and very easy-running, reducing friction to a minimum. The load is raised by a friction drive controlled by a hand

lever at the side of the machine, and is lowered by the use of a foot brake immediately below; thus the operations necessary to raise and lower the load can all be made with the operator standing in one position.

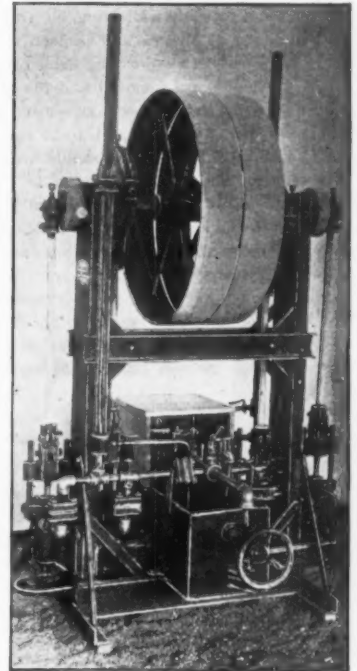
The drumshaft is provided with a wrenchhead on one side, which can be used for hauling any material that may be wanted. In other words, it constitutes an independent hoist.

During such time as this rig is not used as a hoist the engine can be utilized as power for any purpose desired.

The Blakeslee Manufacturing Co. is

Fisher's Hydraulic Stone System.

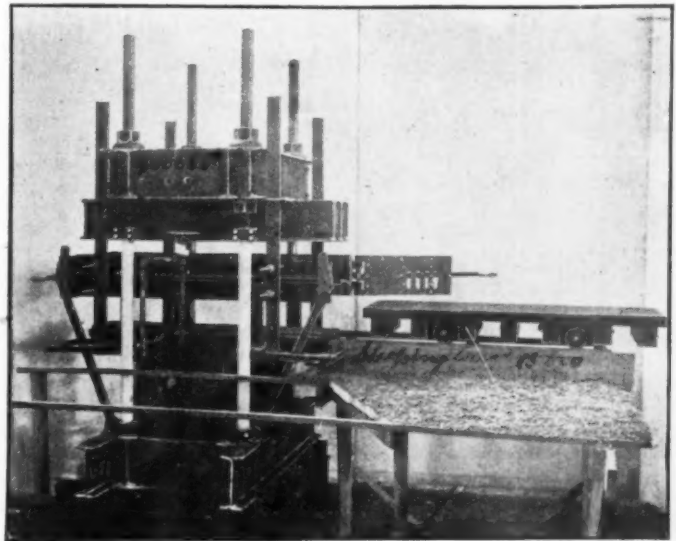
It has been the study of cement workers to ascertain how to produce solidified blocks for all purposes and to place them instantly where they can receive proper curing. It is claimed that this is accomplished by using Fisher's Hydraulic Stone System, which employs a powerful automatic and adjustable hydraulic press which pounds together the material with a pressure of 400,000 pounds. This press operates with a vertical power of four hydraulic pumps, all applying their force on the hydraulic rammer at the same time



VERTICAL POWER, FOUR HYDRAULIC PUMPS, FOR 200-TON PRESS—FISHER HYDRAULIC STONE SYSTEM.

and solidifying the material in the shape desired. Rendering the same pressure to each square inch, this system produces, it is stated, at all times structural material that is alike in kind, strength, color and durability.

The machine is claimed by the manufacturers to be adjustable for all purposes, the steel frame being large enough to receive 32 brick of the usual size at one time, and only 30 seconds required to fill and press each mold ready for the receipt of another, and large enough to manufacture angular or hollow blocks, window sills and



A 200-TON AUTOMATIC AND ADJUSTABLE HYDRAULIC PRESS—FISHER HYDRAULIC STONE SYSTEM.

also the manufacturer of the "Blakeslee" Gasoline Engine, which is now in extensive use.

caps, doorsteps, curbs, sidewalk blocks, chimney columns, sewer pipe, wainscoting and flooring or imitation marble or granite

ornamentation. The machine in working trim stands about 11 feet in height, connected up with massive strain-rods and heavy steel I beams resting on top of a powerful hydraulic ram. Briefly told in describing the process, the prepared material from a mixing machine automatically flows into the required number of forming boxes to fill the steel frame of the machine. These forming boxes are provided with easy-running trucks, which are rolled to the machine with their load and the power applied to the material in the molds. When this is accomplished the power is thrown off and the machine automatically drops back and unlocks itself, throwing open its end-gates and allowing the truck with its load of shaped and pressed material to proceed to the curing sand beds, where the molds are removed and the finished material is left to set and season on the damp curing beds of sand, to be moistened with water by spraying should necessity require, the trucks returning to the automatic mixer to repeat the operation, as many trucks and molds to be employed as is necessary to keep the machine moving or to meet requirements.

Further details regarding this system and the machinery used can be obtained by addressing the Fisher Hydraulic Stone System, 384 Second street, Memphis, Tenn.

The 1904 Continental Linter.

The question of better separation has never been agitated more than at the present time by oil-mill operators, they realizing as never before the great loss that is occasioned by poor separation. Better separation, of course, calls for better delinting, and better delinting means improvement in linters.

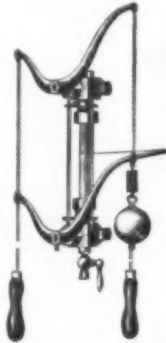
The Continental Gin Co., appreciating this fact, has, in making a large number of improvements to its 1904 Continental

drive. This driving arrangement was attached to quite a number of linters of different manufacture during last fall, and in all cases greatly increased the output. With the ring-oiling boxes, breast-lifting attachment and new arrangement for adjusting mote board and several other minor improvements, all based on several years' experience, the company offers a perfect machine.

For further particulars write Continental Gin Co., Birmingham, Ala. Its linters are now being operated in over 200 oil mills.

The Cunningham Water Gauge.

It is a well-known fact that the water-glass is the weakest point on a boiler, and



"CUNNINGHAM" AUTO-POSITIVE SELF-CLOSING WATER GAUGE.

any appliance that will protect that point must necessarily be a valuable addition.

If the water-glass breaks on a boiler, the water is blown out, and if there is fire under the boiler, as is generally the case, unless the gauges are closed the boiler will be ruined. In many cases valuable property has been destroyed in this way; also engineers and firemen have been seriously scalded by the blowing out of a water-glass. In many cases it is next to impos-

water or steam can be shut off. In fact, any engineer or even the ordinary layman can see the great advantage of an appliance of this kind.

The Cunningham Auto-Positive Self-Closing Water Gauge, if properly taken care of, is absolutely positive.

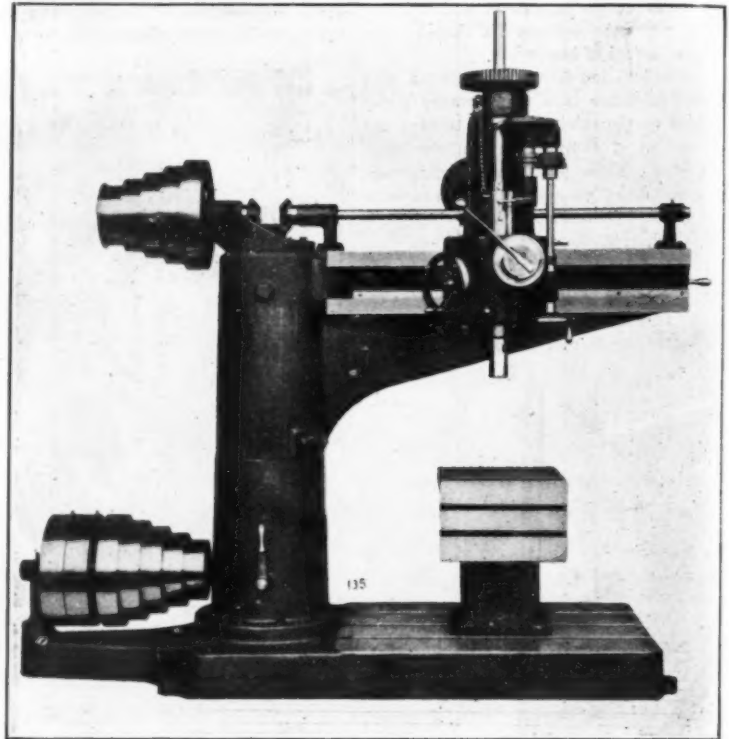
Its motive power is gravitation. Boiler scale or corrosion cannot interfere with it.

It admits of being "tried" at all times by the operator by simply rocking the levers slightly, without disarranging its

size, is provided with both hand and power feed and quick advance and return.

The feeding mechanism furnishes three rates of feed, advancing by even increments from .008 inch to .016 inch per revolution of spindle, each of which is instantly available by means of our standard dive key.

The driving mechanism contains but seven gears, the pitch and periphery speed of which are conducive to long life. The speeds are five in number, and advance in



A SEMIRADIAL DRILL.

parts, thereby insuring its working positively. If the glass cracks enough to let out steam or water that would injure the attendant or boiler, instead of flying into a thousand pieces, the ball is of sufficient weight to pull out the glass and shut off the cocks instantaneously.

This gauge is manufactured by the Standard Gauge Manufacturing Co. of Syracuse, N. Y.

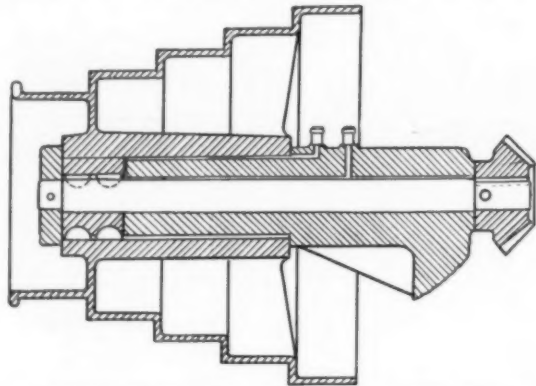
A Semiradial Drill.

The chief characteristics of the semiradial drill shown by the accompanying

geometrical progression from 50 to 170 revolutions per minute.

The frame may be said to consist of but five parts—the base, column, cap, arm and armshaft—each of which are commensurate with the continuous, severe work expected of a machine of this character.

The general dimensions of the machine are: Diameter of spindle, least section, 1 13-16 inches; spindle bored to fit Morse taper No. 4; traverse of spindle, 18 inches; horizontal range of head, 3 feet 6 3/4 inches; receives under spindle over table, 24 inches; receives under spindle over base,



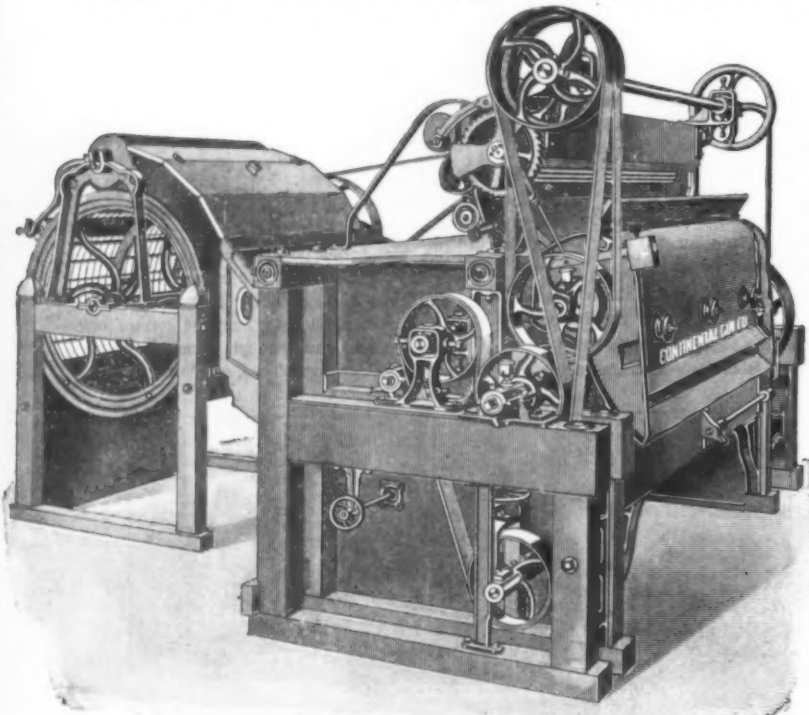
SEMIRADIAL DRILL—CONSTRUCTION OF BEARING FOR UPPER CONE PULLEY.

illustrations are rigidity, simplicity and durability, which, combined with a high ratio of transmission gears, make it an admirable tool for many classes of work.

The head, on which all bearings are of uncommon length, consists of a single casting, and is adjustable on the arm by means of a spiral gear, which gives it an easy, quick motion.

The spindle, which is made of hammered steel, and has an unusually great vertical adjustment for a machine of its

4 feet; receives under spindle over floor, 4 feet 7 inches; drills work in plane of base to center of 8 feet; size of table, working surface, 20x20 inches; size of base, working surface, 3x4 feet 1 inch; distance from floor to extreme height of spindle, 9 feet 4 1/4 inches; number revolutions of driving pulley to one revolution of spindle, 6.9; maximum diameter of driving cones, 18 inches; size of tight and loose pulleys, 3 1/4 x 18 inches; width of cone belt, 3 inches; speed of countershaft, 350 revo-



THE 1904 CONTINENTAL LINTER.

Linter, given special attention to the float and float drive, believing that the friction drive has always been a source of annoyance and expense, and has never developed the full output of a linter or permitted a linter to delint the seed to the extent that is usually desired and now felt to be a necessity.

An accompanying illustration shows a new belt-driving arrangement for the float roll, and this driving arrangement, with the improvements in the float itself and its bearings, permits the carrying of a tighter roll than is possible with the friction

sible to shut off the steam and water without getting injured.

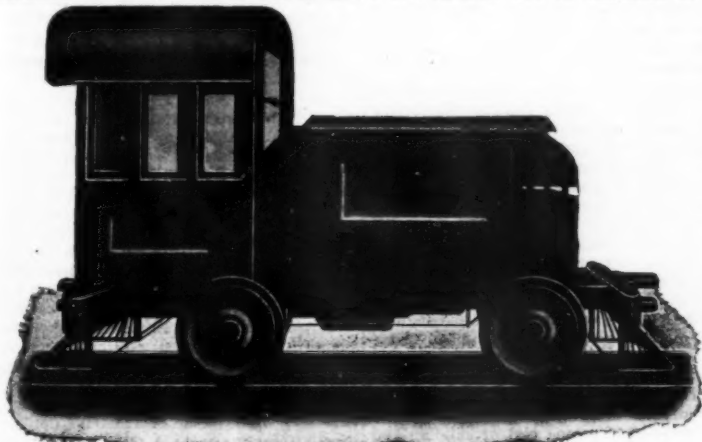
An accompanying illustration shows a device especially adapted for high-pressure service on locomotive boilers and separators (where a man is close to the glass when it breaks), and on acid tanks or on gauges in out-of-the-way places which are inaccessible. Even on low-pressure and house-heating boilers and expansion tanks, where incompetent persons are in charge, and on boilers that are left over night with no attendant, glasses are liable to break and do great damage before the

lutions; floor space required, 9 feet 3 inches by 11 feet 9 inches; weight, net, 6500 pounds.

This semiradial drill is built by the Bickford Drill & Tool Co., Cincinnati, Ohio.

Passenger Gasoline Locomotive.

Since its first introduction the use of gasoline as a motive power has steadily increased. The advantages gained by the



PASSENGER GASOLINE LOCOMOTIVE.

use of this fuel have been many, and its adaption to new purposes is seen every day by announcements in the mechanical world. An accompanying illustration presents a view of the passenger gasoline locomotive built by the Prouty-Pierce Locomotive Manufacturing Co., 665 Adams street, Kansas City, Kan. This company builds gasoline locomotives exclusively, its product being especially adapted to handling passenger traffic on suburban and interurban roads connected with railroad trunk lines. On the plan of the inde-

street cars; easily started and stopped to pick up short hauls, or it may be run 100 miles or more without a stop. Only one man is required to operate it. This locomotive is entirely safe.

An illustrated descriptive book can be obtained by addressing the manufacturer.

A Seven-Inch Molding Machine.

An accompanying illustration represents a new machine now on exhibition at St.

Louis. This is a seven-inch molder, convenient to set up and adjust.

The frame is cast solid, and is wide and long, which gives ample room for wide and long belts. It is of such design as to make it stronger and stiffer, to allow convenient access to the inside vertical head, and at the same time affords a rigid support to the rear end of table which carries the under cutterhead, a clamp-bolt holding the frame and table together. These are valuable features that will be appreciated by the operator, and they are accomplished

be moved in or out without disturbing the angle at which placed. The inside vertical spindle is attached to the table, and therefore moves up and down with the table the same as does the outside spindle. When adjusted to the desired position it is clamped firmly in two places.

The top-head arbor has an outside bearing which is easily removed in case it is desired to remove or change the head. This bearing is held on the top by the binding bolt, and is also firmly bolted to the frame of the machine near the floor in a very substantial manner, and also to the upper framing by a clamp-bolt through the table.

The feed consists of three feed-rolls, the two upper rolls being driven by a downward pressure through the gears, thus insuring a strong feed to meet any resistance. The one in the bed is driven by an expansion gear; one four inches in diameter, directly over the one in the bed, and one two and one-half inches in diameter, nearer to the top head, to help hold material being worked down solid on the bed, as well as to feed. These rolls also have a screw adjustment to and from the cutterhead, also to regulate the inclination to draw the material to the fence side of the machine. The bed will open 12 or 14 inches for jointing, etc., and the feed has the same power in all positions of the bed. The rolls are weighted, the lever and weights being below and within the framing quite out of the way, and a spring intercepts between the lever and the roll connections so as to minimize any shock when starting pieces of work. The feed lever when raised to a vertical position lifts the feed-rolls when it is desired to withdraw a piece of stock.

There are two rates of feed by cone pulleys, and by changing one pulley two additional rates are provided for. Two pulleys are furnished with the machine. Un-

This extension of the bed swings to the side for adjustment or sharpening cutters.

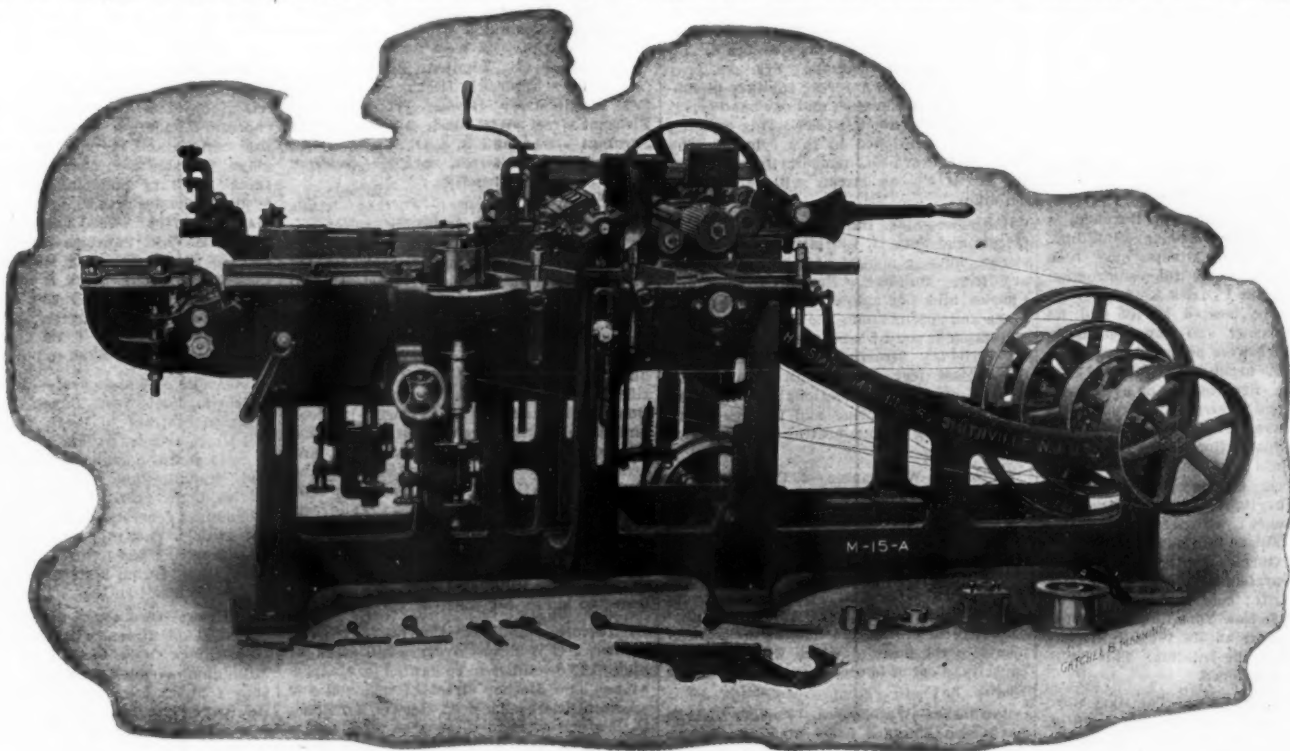
The cutterheads furnished with the machine are all four-slotted, tipped and made of high-carbon steel. There are four heads, one to each arbor, and all of the same cutting diameter, thus allowing an interchange of cutters on the different heads.

Besides the spring posts and guides shown on the table in cut is a pressure bar immediately after the upper cutterhead, and another over the under cutterhead. These bars are fitted with pressure feet, which may be set at any angle to fit the molding being worked, and they may be connected together by a piece of wood, thus making the pressure on material continuous from the upper cutter till it is discharged from the machine. These bars can readily be thrown up out of the way for sharpening cutters, and the adjustable chipbreaker before the cut is likewise conveniently removable.

All pulleys on the machine are of generous diameter and width of face, to give good width of belts and not excessive belt speeds. They are turned carefully and balanced in the plane of rotation, and hence will run true and in perfect balance at any speed.

All needed hold-downs, pressures, guides and springs are provided, and in all places where practical are controlled by hand-wheels or stationary wrenches or handles. The spring posts are held solidly by improved cast-steel clamp, which is very much superior to the old method of a set-screw against the post, not only holding more firmly, but not bruising the post, and easier to repair in case it becomes necessary to renew one of the screws.

Each four-side machine is furnished with one under cutterhead with spindles attached; four slotted wrought-steel heads



A SEVEN-INCH MOLDING MACHINE.

pendent locomotive or the combination car, they are economical, reliable and safe, and can be operated at a speed to meet the requirements of the service. The company building these machines states that it is prepared to give full guarantees. The type herewith illustrated heads either way. Provision is made to store gasoline and cool water for a half-day's run, and the machine is speeded to meet requirements. It has weight and power to haul a railroad passenger coach or large interurban street car; built in smaller size suited to haul

in a very simple and substantial manner.

The arbors for the heads are all one and one-half inches diameter in the bearings and one and one-quarter inches where the heads are attached. The bearings are all of proper length, and the top and under heads have longitudinal adjustment, while the side heads have adjustment in all directions, including angular. While the angular adjustment of the heads is necessarily limited on this size machine, that of the outside head gives a range of nearly 30 degrees, and when set at an angle can

less otherwise ordered, the pulleys will be of sizes to give 25, 33, 40 and 52 feet per minute. The feed is started or stopped by a tightener controlled by a hand lever very convenient to the operator.

The under head has adjustment to regulate the amount of cut, and the end of the bed after the under head has adjustment to fit the cut, as well as being raised or lowered with the head when it is once set to suit the cutters. Therefore it is right for light or heavy cut without attention when once set with the cutters in use.

to the other spindles, all heads having cutterhead bolts and a pair of plain knives to each head; chipbreaker to outside vertical spindle; one caphead; wrenches and parts shown in the engraving.

This molder is manufactured by the H. B. Smith Machine Co., Smithville, N. J.

The United States Cast-Iron Pipe & Foundry Co. will divide between its Anniston and Bessemer plants an order for 25,000 tons of water pipes for the city of Cincinnati.

Construction Department

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY.

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ADDRESS FULLY.

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECTLY.

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

BALTIMORE BUILDING NOTES.

Business Buildings.

Baltimore—Store Building.—Burnham & Wells, builders, Builders' Exchange Building, Charles and Lexington streets, have been awarded the contract for the construction of store building for Charles Keidel, 914 St. Paul street, to be located at 102 and 104 East Baltimore street, and plans and specifications for which were prepared by Sperry, York & Sawyer, architects, Builders' Exchange Building. Structure to be five stories high, 45x103.5 feet; terra-cotta front with architectural terra-cotta trimmings; marble base; concrete foundation; steel beams and girders; cast-iron columns; slow-burning construction; tin roofing; fireproof vault doors; pavement lights; fire-escape; metal frames and sashes; wireglass; granolithic pavement; galvanized-iron skylight; electric wiring and fixtures; sanitary plumbing; steam-heating system; passenger elevator and pavement lift; cost of building to be about \$65,000. The New York Clothing House, temporarily located at 319 West Baltimore street, will occupy the building. This building previously mentioned.

Baltimore—Store Building.—The Mary Boyd estate has awarded contract to Brady & Watters, builders, 532 St. Paul street, for erection of store building to be located at 11 West Fayette street. Structure to be four stories high, 19.2x74 feet; brick with stone trimmings; concrete foundation; tin roofing; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevator; cost to be about \$10,000.

Baltimore—Apartment-house.—Charles J. Bonaparte, 216 St. Paul street, has awarded contract to John Cowan, builder, 106 West Madison street, for erection of addition to building 1527 Linden avenue and for general repairs, converting it into an apartment-house. Structure to be three stories high, 15x44 feet; brick; tin roofing; sanitary plumbing; gas fixtures; hot-water heating system; cost to be about \$7000.

Baltimore—Bank Building.—It has been re-

ported that New York architects have been commissioned to prepare plans for the bank building to be located at Baltimore and Holliday streets for the German Bank, Lexington and North streets, but the Manufacturers' Record is authoritatively informed that no architect has as yet been engaged.

Baltimore—Office Building.—Further details have been obtained concerning office building for the Gaither estate, 224 St. Paul street, to be located at 105, 107 and 109 North Charles street, and plans and specifications for which were prepared by Martin C. Miller, architect, 224 St. Paul street. Structure to be 10 stories high with basement, 47.5x88.5 feet; ornamental cast-iron front for first, second and third stories, brick with Bedford stone and ornamental terra-cotta trimmings for the remaining stories; concrete foundation; steel-frame construction covered with fireproofing materials; cast-iron columns; terra-cotta or reinforced concrete floors throughout building; galvanized-iron cornice and copings; galvanized-iron skylights glazed with wireglass; prismatic pavement lights; metal window frames and sashes glazed with wireglass; fire-escape; terrazo floors; fireproof vaults; electric wiring and fixtures; sanitary plumbing; steam-heating system; two electric passenger elevators. Wm. Miller & Sons, 345 North Charles street; Wells Bros. Company, 344 North Charles street; Thompson-Starrett Company, 606 North Charles street; John A. Sheridan Company, 321 North Holliday street; F. B. Gilbreth, 211 North Liberty street; Milliken Bros., 11 West Mulberry street; Tidewater Building Co., 227 St. Paul street; Henry Smith & Sons Company, 116 South Regester street; James Stewart & Co., 319 North Charles street, and Morrow Bros., 212 Clay street, have been selected to bid on the work. Bids to be in June 6.

Baltimore—Warehouse.—A. W. Stehman, 113 North Greene street, has awarded contract to J. H. Miller, builder, 110 Dover street, for erection of warehouse to be located on southeast corner Light and Lombard streets after plans and specifications by Owens & Sisco, architects, 14 West Lexington street. Structure to be five stories high, 83x80 feet; brick with terra-cotta trimmings; concrete foundation; steel beams and girders; cast-iron columns; fire shutters; electric wiring and fixtures; sanitary plumbing; two power elevators and one hand elevator; cost to be about \$35,000. This building previously mentioned in this column. The B. C. Bibb Stove Co., temporarily located at 113 North Greene street, will occupy the building.

Baltimore—Store Building.—J. Charles Linthicum and Seth H. Linthicum, 314 St. Paul street, have commissioned Herbert Crisp, architect, Builders' Exchange Building, Charles and Lexington streets, to prepare plans and specifications for store building to be located at southwest corner Baltimore and Gay streets. Structure to be four stories high, 24x66 feet; brick with ornate trimmings; concrete foundations; tin or slag roofing; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevators.

Baltimore—Warehouses.—J. Charles Linthicum, 314 St. Paul street, as agent for Mrs. J. Charles Linthicum, is arranging for the construction of four warehouses to be located on northeast corner Calvert and Water streets.

Baltimore—Hospital.—The trustees of Franklin Square Hospital, Calhoun and Fayette streets, will make a number of improvements to the hospital which will double its capacity. Cost of improvements will be about \$30,000.

Baltimore—Warehouses.—Further details have been obtained concerning warehouses for Simon Rosenberg, 107 North Howard street; Burgunder Bros., 307 West German street, and Hamburger Bros., 16 South Eutaw street, to be located at 36, 38 and 40 Hopkins Place, and plans and specifications for which were prepared by Louis Levi, architect, Central Savings Bank Building, Charles and Lexington streets. Structures to be five stories high with basement, 72x126 feet; Pompeian-brick front with architectural terra-cotta trimmings; granite base; concrete foundations; steel beams and girders; cast-iron columns; tin roofing; galvanized-iron cornice and skylight; ferro-concrete pavement; fire doors to elevators; fireproof vault doors; fire shutters; prismatic glass; prismatic pavement lights; electric wiring and fixtures; sanitary plumbing; steam-heating systems; power elevators. George Bunnecke & Sons, 306 St. Paul street; Mor-

row Bros., 212 Clay street; J. H. Miller, 110 Dover street; B. F. Bennett, 123 South Howard street; James Stewart & Co., 319 North Charles street; J. A. Sheridan & Co., 321 North Holliday street; Sullivan & Sons Company, 17 East Saratoga street; Henry Smith & Sons Company, 116 South Regester street; John Hiltz & Son, 3 Clay street, and Kendrick & Roberts, Inc., 216 North Liberty street, have been selected to bid on the construction. Bids to be in June 6.

Baltimore—Warehouse.—The Board of Trustees of the Johns Hopkins University Trust Estate has awarded contract to James Stewart & Co., builders, 319 North Charles street, for erection of warehouse to be located at 28, 30 and 32 Hopkins Place, and plans and specifications for which were prepared by Wyatt & Noiting, architects, Builders' Exchange Building, Charles and Lexington streets. Structure to be six stories high with basement, 90x200 feet; brick with architectural terra-cotta trimmings; concrete foundation; slow-burning construction; slag roofing; sprinkler system both inside and outside building; prismatic wireglass and wire-plate glass throughout building; electric wiring and fixtures; sanitary plumbing; steam-heating system; four electric elevators; electric pump; cost of building and equipment will be between \$300,000 and \$400,000. Daniel Miller & Co., temporarily located at 109 Hanover street, will occupy the building. This building previously reported.

Baltimore—Warehouse.—Further details have been obtained concerning warehouse for Joseph Periman to be located at 21 South Calvert street, and plans and specifications for which were prepared by Louis Levi, architect, Central Savings Bank Building, Charles and Lexington streets. Structure to be four stories high with basement, 20.6x75 feet; brick with architectural terra-cotta trimmings; granite base; concrete foundation; steel beams and girders; tin roofing; prismatic glass; galvanized-iron skylight wiring and fixtures; sanitary plumbing; steam-heating system; power elevator. Geo. B. Cunningham, 103 Mercer street; Burnham & Wells, Builders' Exchange Building, Charles and Lexington streets; the Charles McCaul Company, 123 West Saratoga street; Henderson & Co., Limited, 218 West Fayette street; Frederick Decker & Son, 1209 East Biddle street; Herman Probst, 11 East Pleasant street; Wm. Steele & Sons, 17 West Saratoga street, and R. C. Ballinger & Co., 21 West Saratoga street, have been selected to bid on the construction.

Baltimore—Warehouse.—Further details have been obtained concerning warehouse for the Janney heirs, Francis White, trustee, 341 North Charles street, to be located at 115, 117 and 119 Hollingsworth street, and plans and specifications for which were prepared by Archer & Allen, architects, Central Savings Bank Building, Charles and Lexington streets. Structure to be three stories high, 37.1x63.7 feet; red-brick front with artificial-stone trimmings; concrete foundation; steel beams and girders; cast-iron columns; slag roofing; reinforced concrete lintels; concrete pavement; fire shutters; fire-escape; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevator. Morrow Bros., 212 Clay street; John Cowan, 106 West Madison street; Wm. Ferguson & Bro., 214 Clay street; John Hiltz & Son, 3 Clay street, and J. A. Sheridan & Co., 321 North Holliday street, have been selected to bid on the construction.

Baltimore—Dwellings.—Charles H. Gerwig, builder, 2142 Walbrook avenue, will erect for himself 13 dwellings to be located on Madison avenue and Mosher street after plans and specifications by Jacob F. Gerwig, architect, 16 Clay street. Structures to be three stories high, 15x60 feet; iron-spotted brick front with marble base and trimmings; tin roofing; galvanized-iron cornices; granolithic pavements; electric wiring and fixtures; sanitary plumbing; furnace-heating systems; cost to be about \$40,000.

Baltimore—Store Building.—J. W. Putts & Co., 204 Park avenue, have awarded contract to D. W. & G. H. Thomas, builders, 419 North Charles street, for erection of store building to be located at northwest corner Lexington and Park avenue, and plans and specifications for which were prepared by F. E. & H. R. Davis, architects, 250 St. Paul street. Structure to be six stories high with basement, 35x110 feet; red brick; galvanized-iron and plate-glass front; concrete foundation; steel beams and girders; cast-iron columns; tin roofing; slow-burning construction; electric wiring and fixtures; sanitary plumbing;

steam-heating system; four electric elevators and one electric pavement lift; pneumatic-tube cash-carrier system. This building previously mentioned.

Baltimore—Warehouses.—E. B. Hunting, 213 Courtland street, has purchased lot at 17 West Conway street, 27.6x82 feet, and a lot on Frederick street near Lombard, 44x70 feet, and will erect warehouses on the sites.

Baltimore—Warehouses.—Further details have been obtained concerning the nine warehouses for the Johns Hopkins Hospital, 211 North Charles street, to be located on Light, Pratt and Balderston streets, plans and specifications for which were prepared by Sperry, York & Sawyer, architects, Builders' Exchange Building, Charles and Lexington streets. Structures to be 23.9x77.2 feet; red-brick front with architectural terra-cotta trimmings; granite base; concrete foundation on piling; steel beams and girders; cast-iron columns; tin or slag roofing; nine fire-escapes; metal window frames and sashes; wireglass; nine galvanized-iron skylights glazed with wireglass; alternate bids on terra-cotta or reinforced concrete floors and roof; electric wiring and fixtures; sanitary plumbing; steam-heating systems; power elevators. Murphy Construction Co., 202 North Liberty street; A. J. Robinson Company, Franklin and Cathedral streets; F. B. Gilbreth, 211 North Liberty street; John Cowan, 106 West Madison street; Tidewater Building Co., 227 St. Paul street; Norcross Bros., Hotel Rennett; Wells Bros. Company, 344 North Charles street; James Stewart & Co., 319 North Charles street; Thompson-Starrett Company, 606 North Charles street; Wm. Steele & Sons, 17 West Saratoga street; Wm. Miller & Sons, 345 North Charles street; D. W. & G. H. Thomas, 419 North Charles street; Cramp & Co., 407 St. Paul street; D. C. Weeks & Co., 9 East Centre street, and Westlake Construction Co., Hotel Rennett, have been selected to bid on the construction. Bids to be in June 3.

Baltimore—Warehouse.—Pierre C. Dugan & Nephew, 16 East Lexington street, as agents for Misses Bogue, will erect warehouse to be located at 6 South Hanover street after plans and specifications by W. H. Hodges, architect, Wilson Building, Charles and Saratoga streets. Structure to be four stories high, 20x75 feet; brick front with bluestone trimmings; granite base; concrete foundation; tin roofing; galvanized-iron cornice and skylight glazed with wireglass; fire shutters; electric wiring and fixtures; sanitary plumbing; hot-air heating system; dumb-elevator; plate and leaded glass store front. The Charles McCaul Company, 123 West Saratoga street; Cramp & Co., 407 St. Paul street; Morrow Bros., 212 Clay street; John Stack & Sons, 250 West Preston street; R. H. Frazier & Son, 220 St. Paul street; Elmer Parrish, 185 North Luzerne street, and John T. Buckley, 916 Bolton street, have been selected to bid on the work.

Baltimore—Warehouse.—Mrs. Annie E. Mitchell, 1526 West Fayette street, has awarded contract to B. H. Hayes, builder, 1121 Riggs avenue, for erection of warehouse to be located at northwest corner Pratt street and Franklin lane. Structure to be four stories high, 40x35 feet; brick with stone trimmings; concrete foundation; steel beams and girders; cast-iron columns; tin roofing; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevator; cost to be about \$10,000.

Baltimore—Dwellings.—Clarence Hampson, 207 St. Paul street, will erect for himself 14 dwellings to be located on Wilkens and Millington avenues. Structures to be two stories high; brick with stone trimmings; tin roofing; galvanized-iron cornices; sanitary plumbing; gas fixtures; furnace-heating systems; cost to be about \$15,000.

Baltimore—Warehouse.—William Keyser, 14 East Mt. Vernon Place, has purchased for \$20,000 site on Hanover street near German and will erect warehouse.

Baltimore—Restaurant.—The Safe Deposit & Trust Co., 13 South street, as trustee, has awarded contract to D. W. & G. H. Thomas, builders, 419 North Charles street, for erection of restaurant to be located at 104 and 106 West Fayette street, plans and specifications for which were prepared by Hale & Morse, architects, 21 East Saratoga street. Structure to be three stories high, 34.10x75 feet; limestone front to second story and brick with terra-cotta trimmings for remaining stories; concrete foundation; steel beams and girders; cast-iron columns; slag roofing; mosaic flooring; iron stairway; galvanized-iron skylight; fire-escape; electric wir-

ing and fixtures; sanitary plumbing; steam-heating system. This building previously reported.

Baltimore—Courthouse.—The Courthouse Commission, with offices in the courthouse, has been empowered to take charge and direct the repairs to be made to the courthouse caused by the fire. About \$150,000 will be expended.

Baltimore—Warehouse.—Joseph Catanzaro & Bro., fruit dealers, 106 Hanover Market, have purchased from Samuel R. McDowell the lot, 20.6x90 feet, located at 25 East Pratt street, and will erect four-story warehouse on the site.

Baltimore—Warehouse.—The Safe Deposit & Trust Co., 13 South street, as trustee for the Murray estate, has awarded contract to John Cowan, builder, 106 West Madison street, for erection of warehouse to be located at 7 Hanover street after plans and specifications by Ellilcott & Emmart, architects, 323 North Charles street. Structure to be four stories high, 20.2x69.8 feet; brick with ornate front; concrete foundation; steel beams and girders; cast-iron columns; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevator; cost to be about \$15,000. This building previously reported.

Baltimore—Store Building.—The Safe Deposit & Trust Co., 13 South street, as trustee for the A. S. Abell estate, has commissioned Thomas B. Marshall, builder, 111 South Eutaw street, to erect store building to be located at 115 West Baltimore street after plans and specifications by Baldwin & Pennington, architects, 311 North Charles street. Structure to be five stories high; ornate-brick front; concrete foundation; steel beams and girders; cast-iron columns; tin roofing; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevator. This building previously reported.

Baltimore—Store Building.—The Safe Deposit & Trust Co., 13 South street, as trustee for the A. S. Abell estate, has commissioned Thomas B. Marshall, builder, 111 South Eutaw street, to erect store building to be located at 501 East Baltimore street after plans and specifications by W. H. Hodges, architect, Wilson Building, Charles and Saratoga streets. Structure to be three stories high, 15x66 feet; ornate-brick front; concrete foundation; tin roofing; electric wiring and fixtures; sanitary plumbing; steam-heating system. This building previously reported.

Baltimore—Store Building.—Further details have been obtained concerning store building for Thomas J. Lindsay, 112 North Paca street, to be located at 310 East Baltimore street, and plans and specifications for which were prepared by Sperry, York & Sawyer, architects, Builders' Exchange Building, Charles and Lexington streets. Structure to be three stories high, 19.11x100 feet; brick front with terra-cotta and galvanized-iron trimmings; granite base; concrete foundation; steel beams and girders; cast-iron columns; tin roofing; galvanized-iron cornice; copper frames and sashes; wireglass; granolithic pavement; electric wiring and fixtures; sanitary plumbing; steam-heating system. Brady & Watters, 532 St. Paul street; John Stack & Sons, 250 West Preston street; John Cowan, 106 West Madison street; Luther Wright, 324 West Biddle street, and Morrow Bros., 212 Clay street, have been selected to bid on the construction. Bids to be in June 4.

Baltimore—Store Building.—Morris Abrahamson, 26 North Exeter street, will erect for himself store building to be located at 704 East Baltimore street. Structure to be four stories high, 25x100 feet; brick with stone trimmings; concrete foundation; tin roofing; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing; elevator; cost to be about \$10,000.

Baltimore—Dwelling.—J. T. Haxall, 1037 St. Paul street, has awarded contract to Joseph J. Hooper, 1439 William street, for erection of back building and general repair of main dwelling. Back building to be four stories high, 18.8x30 feet; brick; concrete foundation; tin roofing; electric wiring and fixtures; sanitary plumbing; steam-heating system; cost to be about \$4000.

Baltimore—Warehouse.—Further details have been obtained concerning warehouse for Theodore Marburg, 14 West Mt. Vernon place, to be located at 213 and 215 East Fayette street, plans and specifications for which were prepared by Baldwin & Pennington, architects, 311 North Charles street. Structure to be five stories high, 37.10x101 feet; brick front with granite trimmings; concrete foundation; steel beams and girders; cast-iron columns; slow-burning construction; galvanized-iron bow windows and cornice; fire shutters; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevator. George A. Fuller

Construction Co., 612 North Calvert street; Henry Smith & Sons Company, 116 South Regester street, and Wells Bros. Company, 344 North Charles street, have been selected to bid on the construction.

Baltimore—Warehouse.—The Sheppard and Enoch Pratt Hospital, 315 North Charles street, has commissioned Charles E. Cassell & Son, architects, 411 North Charles street, to prepare plans and specifications for warehouse to be located at 23 and 25 South Charles street. Structure to be six stories high, 60x150 feet; brick with terra-cotta trimmings; concrete foundation; steel beams and girders; cast-iron columns; tin or slag roofing; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevators; cost to be about \$60,000. Muth Bros. & Co., wholesale druggists, temporarily located at 131 South Howard street, will occupy the building.

Baltimore—Restaurant.—L. H. Neudecker, president Southern Trust & Deposit Co., Gay and High streets, has awarded contract to Charles L. Stockhausen, builder, 414 East Fayette street, for erection of restaurant to be located at northwest corner Baltimore and Gay streets. Structure to be three stories high with basement, 24x66 feet; Pompeian-brick front with terra-cotta trimmings; concrete foundation; steel beams and girders; cast-iron columns; tin roofing; galvanized-iron cornice; metal ceilings; leaded-glass windows; electric wiring and fixtures; sanitary plumbing; steam-heating system; cost to be about \$40,000.

Baltimore—Store Building.—Louis Snelman, 429 Eutaw street, has awarded contract to Melver & Piel, builders, Builders' Exchange Building, Charles and Lexington streets, for erection of store building to be located at 425 and 427 Eutaw street, plans

stone trimmings; concrete foundation; tin roofing; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing.

Baltimore—Store Building.—Geo. H. Paulus, 2901 West North avenue, has purchased the property located at 306 and 308 East Baltimore street. The size of the lot is 36x140 feet.

Manufacturing Buildings and Other Enterprises.

Baltimore—Brick-manufacturing Plant.—The Arthur B. Nitch Brick Co., located on Washington road, has been sold for \$26,500 to John W. Buck, 811 Fidelity Building, Charles and Lexington streets. The plant includes 79 acres, and is fully equipped for manufacturing bricks.

Baltimore—Electric-light and Power Plant.—Richard B. Fentress and S. B. Medairy of the Baltimore Refrigerating & Heating Co., 408 South Eutaw street, mentioned in this column last week as applying for franchise, will expend from \$500,000 to \$1,000,000 in the equipment of a modern electric-light and power plant, and will want competitive prices on the necessary machinery.

Baltimore—Publishing Company.—The Tidings Publishing Co. has been incorporated, with a capital stock of \$5000, by Henry L. Litz, 809 North Washington street; Charles A. Zannia, Adam M. Reed, 812 North Bond street; Edward M. Neuberger, 1827 East Madison street, and John J. Sterner.

Baltimore—Manufacturing Plant.—E. B. Hunting, 213 Courtland street, has purchased the Union Colored Baptist Church, North street near Lexington, and has awarded contract to J. H. Walsh & Bro., builders, 409 South Charles street, for remodeling it into a manufacturing plant. Three stories will be built and electric wiring and fixtures, sanitary plumbing and elevator installed.

Detailed Information

As to every building to be erected in Baltimore, its character, size, method of lighting, heating, etc., is published by the MANUFACTURERS' RECORD. Every industrial and railroad enterprise, every municipal improvement, every important building projected in the whole South is covered with the same painstaking detail in advance of all other publications. Those who need this information daily can find it in the *Daily Bulletin of the Manufacturers' Record*, subscription price \$25 a year. The *Daily Bulletin* is published every business day in the year for the purpose of enabling manufacturers, contractors, engineers and others to keep in daily touch with the rebuilding of Baltimore and the industrial, railroad and financial development of the South and Southwest.

and specifications for which were prepared by D. E. O. Kubitz, architect, 1904 Washington street. Structure to be three stories high with basement, 30.6x61.9 feet; ornate-brick front; concrete foundation; steel beams and girders; cast-iron columns; tin roofing; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing; steam-heating system. This building previously mentioned.

Baltimore—Bank Building.—Further details have been obtained concerning bank building for Hopkins Place Savings Bank, 307 West Fayette street, to be located on Hopkins Place, plans and specifications for which were prepared by Baldwin & Pennington, architects, 311 North Charles street. Structure to be one story high with basement, 49x80 feet; ornate-stone front; concrete foundation; steel beams and girders; cast-iron columns; tile roofing; iron stairways; ornamental grillwork; fireproof construction; metal window frames and sashes; wireglass; metal ceiling; mosaic floor; electric wiring and fixtures; sanitary plumbing; steam-heating system. George A. Fuller Construction Co., 612 North Calvert street; Henry Smith & Sons Company, 116 South Regester street; John Waters, 23 East Centre street; James Stewart & Co., 319 North Charles street; John Hiltz & Son, 3 Clay street; Norcross Bros., Hotel Rennett; B. F. Bennett, 123 South Howard street; Geo. A. Blake, 120 East Lexington street, and Wm. Steele & Sons, 17 West Saratoga street, have been selected to bid on the construction.

Baltimore—Warehouse.—Baldwin & Frick, Clay and Charles streets, as agents for Henry White, have awarded contract to John Cowan, builder, 106 West Madison street, for erection of warehouse to be located at 112 South Frederick street. Structure to be three stories high, 18x80 feet; brick with

Baltimore—Builders' Supplies.—The Levi-Wheeler Fire Brick Co. has been incorporated, with an authorized capital stock of \$2000, for dealing in builders' supplies, by Charles Levi, 418 West Cross street; Alfred Nixon, Agnes Levi, Henry Bevan and W. H. Gosling.

Baltimore—Embroidery-manufacturing.—The Southern Embroidery Co. (Andrew G. Steelman), 668 West Baltimore street, has purchased site on Lexington street near Fremont and will erect factory for manufacturing embroidery. Structure to be three stories high, 25x220 feet; brick with stone trimmings; concrete foundations; steel beams and girders; tin roofing; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing; steam-heating system. Machinery for manufacturing embroidery will be installed.

Baltimore—Shoe Factory.—The Diggs-Vaneman Manufacturing Co. has been incorporated, with an authorized capital stock of \$50,000, for manufacturing and dealing in shoes, by John R. Diggs, 1210 Linden avenue; W. G. Currin, 1427 Edmondson avenue; Herbert Hooper, 1112 Madison avenue; William Penrose and R. M. Diggs.

Baltimore—Incandescent-burner Factory.—The American Lighting Co., 19 North Frederick street, has purchased property located at 831, 833 and 835 Greenmount avenue and will spend about \$10,000 in remodeling the building into a factory for manufacturing gas and naphtha burners for incandescent lighting.

Baltimore—Fertilizer Plant.—The Miller Fertilizer Co., 216 North Gay street, has awarded contract to Melver & Piel, builders, Builders' Exchange Building, Charles and Lexington streets, for erection of fertilizer plant to be located at First avenue and 12th

street, Canton. Structure to be one story high, 112x176 feet; brick and frame construction; tin roofing. Machinery for manufacturing fertilizers will be installed. F. E. & H. R. Davis, architects, 220 St. Paul street, will prepare the plans and specifications. Cost of building will be about \$20,000.

ALABAMA.

Andalusia—Electric-light Plant.—Frank Sutter, previously reported as having secured franchise for the erection of electric-light plant, water-works, etc., has let contract for the erection of the power-house to the Andalusia Manufacturing Co.

Birmingham—Grain Dealers.—The Stephenson-Neal Grain Co. has been incorporated, with a capital stock of \$10,000; Ben A. Neal, president; John J. Stephenson, vice-president and general manager; L. D. Schwab, secretary.

Birmingham—Lime Works.—Keystone Lime Co., reported last week as increasing capital from \$25,000 to \$55,000, will enlarge plant and install machinery for increasing capacity from 600 barrels to 1200 barrels of lump lime per day. R. E. Bowden is engineer in charge.

Ensley—Brass, Bronze and Iron Works.—The Ensley Brass & Bronze Co. will enlarge and improve its plant and provide for making iron as well as brass and bronze castings.

Gadsden—Iron Mining.—G. H. Schuler, E. T. Schuler and R. N. McDonough have incorporated the Alabama Mining Co., with a capital stock of \$60,000, and will develop iron and manganese deposits.

Gadsden—Telephone System.—Southern Bell Telephone Co., Atlanta, Ga., R. M. Adams, district manager, Gadsden, Ala., will construct four copper circuit telephone lines from Gadsden to Chattanooga, Tenn., at a cost of \$50,000.

Jemison—Gold Mining.—It is reported that M. B. Hilliard and H. Dudley Coleman of New Orleans, La., will organize company and put in stamp mill for the development of the Glascock mine.

Langdale—Dam Construction.—West Point Manufacturing Co., West Point, Ga., L. Lanier, president, will erect cement-rock dam on the Chattahoochee river near Langdale to contain about 3400 cubic yards. Bids for construction will be received until June 8.

Mobile—Oyster-packing Plant.—The Alabama Port Co. has awarded contract to Jett Bros. for the construction of 3600 feet of wharf with building, which will be used by the John Boyle Company of Baltimore, Md., as an oyster-packing plant. About \$13,000 will be expended.

Mobile—Mercantile.—Gulf City Exporting Co. has been incorporated, with a capital stock of \$10,000, to conduct exporting and importing business; Col. P. D. Barker, president; Douglas Smith, vice-president; J. H. Bingham, Birmingham, Ala., secretary and treasurer.

Mobile—Dry-dock Company.—Ollinger & Bruce Dry-Dock Co. will hold a meeting June 20 to consider increasing capital stock from \$75,000 to \$100,000.

Montgomery—Compress and Storage Plant.—Alabama Compress & Storage Co. will rebuild plant recently destroyed by fire.

Woodward—Coke Ovens.—Woodward Iron Co., Wilson & Alber, Birmingham, Ala., engineers, will build 400 coke ovens 7x12 feet each, at a cost of \$125,000.

ARKANSAS.

Blytheville—Grocery.—Arkansas Grocery Co. has been incorporated, with a capital stock of \$50,000; H. W. Graham, president; A. O. Hurton, vice-president; W. E. Tally, secretary; J. E. Franklin, treasurer.

Fayetteville—Electric-light Plant.—The electric plant referred to last week is the personal property of F. W. Fratt, 1001 North Broadway, Oklahoma City. O. T. Mr. Fratt contemplates installing 120-kilowatt alternator steam turbine or a direct-connected automatic engine.

Fort Smith—Coal Mines.—The Arkansas Valley Coal Co. has been incorporated, with a capital stock of \$25,000, to develop coal and timber lands; T. J. Wright, president; O. E. Carnes, vice-president; E. D. Bedwell, secretary; A. N. Sicard, treasurer.

Mansfield—Gas and Oil Wells.—The Home Gas & Oil Co. has been incorporated, with a capital stock of \$10,000, to bore for oil, gas and other minerals; J. W. Harper, president; T. J. Corrigan, vice-president; J. M. Marshall, secretary and treasurer.

McArthur—Land and Lumber.—The Emigh Land & Lumber Co. has been incorporated, with a capital stock of \$25,000, to operate saw-mills and deal in timber lands; J. S. Emigh, president; James E. Emigh, vice-president; E. P. Copeland, secretary and treasurer.

Mena-Manganese Ore.—The Southern Syndicate, Gano Eads, mining superintendent, will develop manganese mines.

Pine Bluff—Cold-storage Plant.—J. C. Sewell will build cold-storage plant.

FLORIDA.

Live Oak—Live-stock.—S. A. Hinely, Worth Stevens and W. R. McGregor have incorporated the Hinely-Stevens Company, with a capital stock of \$30,000, to deal in live-stock.

Marianna—Cottonseed-oil Mill and Guano Factory.—The Marianna Manufacturing Co., referred to last week, will establish cottonseed-oil mill with a capacity of 10 tons, one press; guano factory, enlarge ginney and install machinery for making spindles, balusters and columns.*

Oviedo—Saw-mill.—Bell Bros. contemplate rebuilding saw-mill recently destroyed by fire.

Quincy—Fire Department.—Oscar Altschul, Jr., and others have incorporated the Quincy Fire Department Co. with a capital stock of \$10,000.

Tampa—Building-block Factory.—H. T. Montgomery & Co., recently reported as incorporating, contemplate installing building block machinery.

GEORGIA.

Athens—Cotton Mill.—R. L. Moss & Co., who recently purchased the Athens Manufacturing Co. mill, will re-equip the plant, installing about 10,000 spindles and replacing machinery where needed. Looms will be added later on.

Atlanta—Drug Company.—H. H. Humphries, T. W. McArthur and G. L. Walker have incorporated the Humphries Drug Co. with a capital stock of \$50,000.

Atlanta—Chemical and Bottling Plant.—Joseph P. Bryan and others have incorporated the Georgia Chemical & Bottling Co., with a capital stock of \$100,000, for the erection and operation of chemical and bottling plant.

Atlanta—Medicine and Bottling Plant.—Georgia Medicine & Bottling Co., P. O. Box 8, reported last week as incorporating with a capital stock of \$10,000, has an authorized capital of \$50,000, and is having plans prepared for the equipment of a plant.*

Columbus—Fertilizer Factory.—O. C. Bullock and John T. Fletcher are organizing a company with a capital stock of \$50,000, and privilege of increasing to \$200,000, to erect and equip fertilizer plant.

Dahlonega—Gold-mining.—The Dahlonega Gold Mining & Milling Co., recently reported as arranging to complete canal from Ball Play creek and to build dredge, will invest about \$20,000 for same. Dredge will have a capacity of one cubic yard per minute; Joel T. Miller, Auranla, Ga., engineer in charge; W. E. Rickette of Dahlonega, architect.

Dublin—Fertilizer Works.—S. M. Kellam, W. W. Bush, A. W. Garrett and J. E. Smith, Jr., of Dublin, E. A. Lovett of Wrightsville, Ga., and B. B. Lovett of Sandersville, Ga., have incorporated the Georgia Fertilizer Co. with a capital stock of \$60,000.

Griffin—Water-power-Electrical Plant.—W. J. Kincaid, J. P. Nichols, H. B. Neal and others have applied for charter for the Flint River Power Co., with a paid-up capital of \$25,000 and authorized capital of \$500,000. They have purchased the Flat Shoals water-power and 200 acres of land, and will develop 500 horse-power to be transmitted by electricity.

Lawrenceville—Bottling Works.—B. Nicklin of Jefferson, Ga., and Mrs. W. H. Hutchins of Lawrenceville will establish bottling plant. It is reported that part of the machinery has been purchased.

Lyons—Oil Mill and Fertilizer Works.—Lyons Trading Co. will establish cottonseed-oil mill and fertilizer works.

Marietta—Press-cloth Mill.—Standard Press Cloth Co., reported organized last December with \$100,000 capital, is preparing to build its mill. Product will be camel's hair and mohair, yarns and press cloth. A. F. Parker, superintendent, may be addressed.

Moultrie—Timber Development.—It is reported that R. J. Corbett & Co. have acquired timber rights to 20,000 acres of timber lands and will erect saw-mill to develop same.

Savannah—Coffin and Casket Factory.—Charles A. Cox, John F. Freeman, John R. Eason and others will incorporate the Chatham Casket & Coffin Co., with a capital stock of \$10,000 and privilege of increasing to \$50,000, to manufacture coffins, caskets, sideboards, etc.

Savannah—Electrical Works.—F. J. Kullman, F. S. Van Giesen and E. S. Abraham, Jr., will incorporate the Electric Guaranty Co., with a capital stock of \$3000 and privilege of increasing to \$25,000, to repair and deal in all kinds of electrical equipment.

Savannah—Mining, Milling and Plumbing Supplies.—The Chasmer King Supply Co. (established) will incorporate, with a capital stock of \$100,000, and privilege of increasing to \$200,000, to conduct general mining, milling and plumbing-supply business; offices, West Bay, near Barnard street.

Tennille—Knitting Mill.—It is reported that William McKearn of Philadelphia, Pa., and J. E. McLaughlin of Troy, N. Y., will establish a knitting mill at Tennille, offering to invest \$15,000 if local investors will subscribe \$15,000 to stock of company to be formed.

KENTUCKY.

Ashland—Saw-mill.—Vansant, Kitchen & Co. will rebuild saw-mill recently destroyed by fire.

Junction City—Telephone System.—J. R. Steele, B. W. Durham and H. S. Chase have incorporated the Junction City Telephone Co., with a capital stock of \$5000, to establish telephone system.

Louisville—Oil Wells.—T. E. Hall, William B. Hall, Walter S. Adams of Louisville and J. T. Ramsey of Shelbyville, Ky., have incorporated the Wet Woods Oil Co., with a capital stock of \$500,000, to drill for oil.

Madisonville—Telephone System.—W. N. and W. B. Bailey and M. F. Allen have incorporated the Rural Telephone Co. to construct telephone lines in Hopkins and other counties.

Maysville—Harness Factory.—Kilpp & Brown have awarded contract to I. M. Lane for the erection of a two-story 33x70-foot addition to their harness factory.

Maysville—Tobacco Warehouse.—The Continental Tobacco Co. will erect warehouse 60x250 feet for prizing, packing and shipping tobacco. It is reported that work has begun on same.

Maysville—Saw-mill.—E. N. Forsythe is negotiating for several hundred acres of timber land in Tennessee, and will erect saw-mill on same.

Owensboro.—H. E. Rose of Owensboro, Ky., and V. W. Gates and W. F. Horn of Chicago, Ill., have incorporated the San Miguel Co., with a capital stock of \$500,000.

Wayne County—Oil Wells.—R. A. Dempsey, William Harkins and J. O. Rose, all of Uniontown, Pa., have incorporated the Hibbs Oil Co., with a capital stock of \$30,000, to drill for oil.

LOUISIANA.

Abbeville—Rice Mill.—Planters' Rice Mill Co., reported last week as having plans prepared by Honold & Genter for the erection of rice mill, has let contract to J. A. Petty of Crowley, La., for building mill. Contracts for machinery have been awarded. About \$50,000 will be expended.

Gueydan—Oil Wells.—Gueydan Oil & Mineral Co. has been organized, with \$25,000 capital, and contract has been let to K. S. Connally of Jennings, La., to drill oil well.

Hohen Solms—Syrup Factory.—V. & J. A. Berthelot contemplate the installation of machinery for the manufacture of syrup to be put up in small packages for market.

Jeanerette—Oil Wells.—Chartered: A. Morel Oil Co., with \$60,000 capital, for the development of oil wells. A. Morel is president; L. A. Morel, vice-president, and E. P. Morel, superintendent.

New Iberia—Lumber.—P. L. Renouet Lumber Co., Ltd., has been organized with \$50,000 capital by P. L. Renouet, Felix Patout, Geo. J. Cousin and Jos. A. Breaux.

New Orleans—Electric-light Plant.—Consumers' Electric Co., previously reported organized with Jules Dreyfous, president; Charles Godchaux, vice-president, and Gus Lehman, Sr., secretary-treasurer, has purchased site at \$25,000 on which to erect four-story fireproof building of steel frame and brick, to be equipped with machinery for manufacturing electricity. Boilers will be installed with a capacity of 6500 horse-power.

New Orleans—Fertilizer Factory.—Planters' Fertilizing Co. has been incorporated with \$150,000 capital. William T. Maginnis is president; John H. Maginnis, vice-president, and William E. Turner, secretary-treasurer. Company will at once arrange for the erection of factory.

MARYLAND.

Aberdeen—Electric-light Plant.—Town will vote June 18 on the issuance of \$8000 of bonds for the erection of electric-light plant. Address John Finney Wells, president town commissioners.*

Belair—Flour Mill, etc.—People's National Bank, Delta, Pa., has purchased at \$8000 the milling property of the Henry Record Manufacturing Co., including flour mill, office building, two warehouses, tenant-houses, etc., and will continue to operate the plant.

Cumberland—Forwarding and Transfer Company.—Queen City Forwarding & Trans-

fer Co. has been incorporated, with \$2000 capital, by Harrison L. Herberman, James L. Poling, Charles P. Crawford, Wade H. Poling and Charles Herbert Hyde.

Cumberland—Sanitary Milk Plant.—Tri-State Sanitary Dairy Co., reported incorporated last week with \$50,000 capital for the erection of plant to pasteurize and purify milk, has let contract for the building and machinery to Industrial Construction Co., 1107 Tacoma Building, Chicago, Ill.

Ellicott City—Water-works.—City will vote June 14 on the issuance of \$30,000 of bonds for the construction of system of water-works previously reported. Address The Mayor.

Havre de Grace—Road Improvements.—Harford County Commissioners are considering the expenditure of \$34,000 for the construction of roads in Harford county.

Midland—Electric-light Plant.—It is reported that D. S. Martin, representing a Pittsburg syndicate, is investigating with a view to establishing an electric-light plant.

Washington, D. C.—Gas Plant.—Pintach Gas Co. has applied for franchise to erect and operate gas plant in South Brookland.

Washington, D. C.—Pumping Station.—Rullman & Wilson, Lafayette and Mt. Royal avenues, Baltimore, Md., have contract to erect proposed sewerage-pumping station for city.

MISSISSIPPI.

Benolt—Cottonseed-oil Mill, Electric-light Plant and Water-works.—It is reported that C. L. Lourey contemplates erecting \$100,000 cottonseed-oil mill, electric-light plant and water-works.

Columbus—Fertilizer Factory.—Refuge Cotton Oil Co., W. C. McClure, manager, will erect fertilizer factory in connection with cottonseed-oil mill. About \$50,000 will be expended.

Como Depot—Cottonseed-oil Mill.—Crenshaw Oil Mill Co. has increased capital from \$40,000 to \$60,000.

Greenville—Building-stone Factory.—Greenville Manufacturing Co. has been organized, with \$10,000 capital, by J. M. Robertshaw, II, N. Alexander, J. J. Harty, J. F. Barnes, M. Rosenstock, W. P. Shelton and others to manufacture building stone.

Grenada—Machine Shops.—Grenada Machine Works Co., previously reported incorporated, has completed organization with G. B. Jones, president; D. S. Watson, vice-president; C. B. Bolton, secretary-treasurer, and W. A. Rock, manager, to establish machine shop and succeed D. S. Walton. Company will erect building 30x140 feet.

Gulfport—Sash, Door and Blind Factory.—Chartered: Gulfport Sash, Door & Blind Manufacturing Co., with \$25,000 capital.

Laurel—Manufacturing.—Beard Bros. Company has been incorporated by D. M. Beard, W. T. Beard, W. A. McInnis and others with \$30,000 capital.

Macon—Water-works.—W. F. & A. D. Wilcox, C. E. Jackson, Miss., have prepared plans and specifications for city's proposed \$35,000 water-works system, and bids for construction will be asked within 10 days.*

McComb City—Street Improvements.—City is having preliminary surveys made preparatory to constructing brick sidewalks. Address The Mayor.

Meridian—Cotton Compress.—A. J. Krebs Co., Birmingham, Ala., has contract to erect proposed cotton compress for the Star Compress & Warehouse Co.

Quitman—Lumber Mill.—Vanmeter Lumber Co. of Quitman and Bloomfield, Ind., has been incorporated, with \$10,000 capital, by Louis H. Jones, Lee H. Jones, William Vanmeter and Charles E. Henderson. Company has purchased 1000 acres of timber, and will manufacture lumber.

Shaw—Cotton Gln.—Incorporated: Planters' Gln & Cotton Co., with \$10,000 capital.

Yazoo City—Municipal Improvements.—The city government contemplates perfecting arrangements to provide improved pavements and streets, enlargement and improvement of the water-works and to adopt ordinances requiring the construction of fireproof buildings in certain districts. This is the result of the fire of last week, which destroyed property in the city valued at from \$1,000,000 to \$2,000,000. It has not been practicable as yet to give an accurate list of the buildings and their owners. Address The Mayor.

MISSOURI.

Bloomfield—Barrel, Heading and Hoop Factory.—Griff Glover and associates will incorporate company, with \$35,000 capital, to manufacture slack barrels, heading and hoops. This item was erroneously reported several weeks ago under Virginia.*

Bloomfield—Logging Plant.—Southern Missouri Piling & Tie Co. has been incorporated,

with \$5000 capital, for supplying piling to railroads and to the government in its Mississippi-river work. Address care of Griff Glover.

Perryville—Flour Mill.—Wilkinson Milling Co. will erect the flour mill reported last week as to be built by F. Bueckman and associates. About \$20,000 will be invested and plant will have a daily capacity of 125 barrels; Cornelius Mill Building Co., St. Louis, Mo., architect in charge. W. R. Wilkinson, 212 North Main street, St. Louis, is president.

St. Joseph—Electric-light Plant.—City will vote in July on the issuance of \$325,000 of bonds, \$75,000 to be used for new electric plant. Address The Mayor.

St. Louis—Automobile Works.—Mound City Automobile Co. has been incorporated by John N. Bissell, Anderson M. Robertson of St. Louis, Wilkinson C. Morse, Chillicothe, Ill.; Edward W. Bissell, Poplar Bluff, Mo., and James A. Scott, Alton, Ill., to manufacture and deal in automobiles; capital \$10,000.

St. Louis—Foundry.—Tower Grove Foundry Co. has increased capital from \$6000 to \$10,000.

NORTH CAROLINA.

Ayden—Cottonseed-oil Mill.—Reports state that Dr. Jos. Dixon, J. R. Smith, Jesse Cannon, J. J. Edwards, W. C. Jackson, E. M. Cox and J. M. Blow contemplate establishing cottonseed-oil mill.

Eberman—Lumber.—Edwin Eberman and associates have incorporated the Buck Creek Lumber Co., with \$15,000 capital.

High Point—Mirror Works.—Reports state that the Standard Mirror Works of Pittsburgh, Pa., will remove its factory to High Point.

Kings Mountain—Cottonseed-oil Mill.—Kings Mountain Cottonseed Oil Mill Co. has incorporated, with \$12,000 capital; incorporators, G. F. Hambricht, J. S. Mauney, W. A. Mauney, J. G. Hord, J. C. Baumgardner and associates. Mr. Hambricht was previously reported as to erect cottonseed-oil mill.

Marion—Water-works.—City will vote June 26 on the issuance of \$30,000 of bonds for construction of the water-works reported last week. Address The Mayor.

Maxton—Sash and Door Factory.—Maxton Sash & Door Co. has increased capital from \$1400 to \$4500.

Morehead City—Electric-light Plant.—City has decided to construct electric-light plant reported last month as contemplated, and bids will be received until June 15 for construction; Charles S. Wallace, mayor.*

Murphy—Electric-light Plant and Water-works.—Construction of electric-light plant and water-works is talked of. Address The Mayor.

Murphy—Furniture Factory.—D. P. Tate will establish \$35,000 furniture factory.

Rutherfordton—Mineral Lands.—Max Jasson of Alpena, Mich., and associates have organized the Wolverine Gold Mining Co., with \$500,000 capital, for the development of 1000 acres of mineral land, including gold deposits, reported last week as having been purchased. Thirty-stamp mill and cyanide plant will be erected. F. M. Halperman, Alpena, Mich., is engineer in charge.

Spray—Woolen Mill.—Spray Woolen Mills, recently reported as probably to add looms, has installed 25 broad looms, increasing equipment to 50 looms.

Tarboro—Lumber Mill.—T. W. Thrash and associates are forming company to manufacture lumber.*

Wilmington—Woodworking Factory.—It is reported that Malcolm McKenzie of New York, D. T. Oates of Fayetteville, N. C., and associates have purchased water-front property and will establish woodworking plant.

Wilson—Water-power-Electrical Plant.—J. C. Hales and associates have purchased a water-power property and propose developing it; also propose erecting plant to transmit the power by electricity. They are now investigating the ways and means of best utilizing and developing the power.*

SOUTH CAROLINA.

Batesburg—Electric-light Plant, Water-works, etc.—City has voted the proposed issuance of \$20,000 of bonds for the construction of electric-light plant, water-works, etc. Address The Mayor.

Beaufort—Cannery.—Maggeoni & Co. of Savannah, Ga., have secured site on which to erect factory for canning oysters.

Bishopville—Water-works.—City has voted the issuance of bonds for the construction of system of water-works. Address The Mayor.

Charleston—Machinists' Supplies.—Bailey-Lebby Company has increased capital from \$30,000 to \$60,000.

Charleston—Construction Company.—D. J. Whitmer and E. J. Larsen have incorporated

the Whitmer Construction Co. to engage in the engineering and construction business; capital \$50,000.

Dillon—Cannery.—C. T. O'Ferrall, Jr., and associates will organize company to erect canning factory.

Garnett—Pottery.—Indian Pottery & Brick Co. has been incorporated, with \$100,000 capital, to manufacture pottery; incorporators, Pierre Roberts, J. C. Richardson, Garnett, S. C., and F. J. Howlan, Savannah, Ga.

Georgetown—Horn Mill.—Georgetown Rice Milling Co. contemplates erecting pearl hominy mill; Marks Moses, lessee, 122 Front street, New York, N. Y.*

Greenville—Construction Company.—J. F. Gallivan Building Co. has incorporated, with \$25,000 capital, for general masonry work, such as building power dams, etc.; incorporators, J. F. and D. J. Gallivan of Greenville and A. F. Weng, Palmer, Mass.

Greenville—Drugs.—Incorporated: Featherstone Medicine Co., by J. C. Featherstone, H. M. Perry, R. C. Foster, Jas. E. Payne and associates; capital \$5000.

Greenville—Bottling Works.—M. L. Berry and M. V. Miller have incorporated the Coca-Cola Bottling Co., with \$3000 capital.

Luray—Mercantile.—Coy Johnston, Dr. N. C. Johnston and C. H. Parnell have incorporated the Coy Johnston Company with \$5000 capital.

McColl—Knitting Mill.—Marlboro Cotton Mills (not Marlboro Manufacturing Co. as recently stated) will install a knitting equipment. Capacity will be 400 dozen garments per day. Capital will be increased \$50,000 to provide for the plant. All the machinery has been purchased.

Newberry—Electric-light Plant.—City contemplates constructing electric-light plant. Address The Mayor.

Rock Hill—Woodworking Plant.—Incorporated: Syleeac Manufacturing Co., with \$10,000 capital, to manufacture woodwork of all kinds, by W. S. Lee, Jr., and J. C. Caution. (Erroneously reported last week under Chester.)

Spartanburg—Flour Mill.—Incorporated: Virginia Mills Co., with \$10,000 capital, by E. W. Johnson and H. E. Ravenel.

Spartanburg—Knitting Mill.—Crescent Manufacturing Co. has let contracts for the erection of building to be equipped with knitting machinery. Plans and specifications are being furnished by C. R. Makepeace & Co. of Providence, R. I.

Troy—Cottonseed-oil Mill.—Troy Oil Co. has been organized, with Dr. G. A. Nee, president; John L. Kennedy, vice-president, and W. W. Woodland, manager; capital \$20,000. Company was previously reported as being formed to establish 20-ton cottonseed-oil mill.

Walhalla—Cotton Mill.—Walhalla Cotton Mills will meet June 27 to consider increasing capital by \$50,000.

TENNESSEE.

Arondale—Door and Padlocks.—Gonce Lock & Manufacturing Co. has been incorporated to manufacture combination door and padlock by J. W. Gonce, John L. Gonce, F. L. Gonce, Dora Gonce and C. E. Taylor.

Columbia—Electric-light Plant.—It is reported that Charles B. Bigelow of New York, owner of the Columbia Water & Light Co., will improve plant, installing machinery to supply current during the day.

Cornersville—Phosphate Plant.—Cornersville Phosphate & Mining Co. has been organized, with Dr. A. Jones, president; W. H. Moore, vice-president; Dr. F. H. Gault, secretary, and J. B. Edwards, treasurer; capital \$10,000.

Johnson City—Mercantile.—Incorporated: H. W. Pardue Company, with \$15,000 capital, by H. W. Pardue, J. H. Pras, T. E. Hurst, T. A. Cox and J. A. Carrier.

Memphis—Cotton Factors.—Chartered: Bedford, French & Goodwin Company, by Whyte Bedford, C. T. French, Thomas A. Goodwin, J. C. French and J. A. Goodwin; capital \$30,000.

Memphis—Brewery.—It is reported that a brewery will be established by Chicago parties, and Louis Kinnane, Louis Sambucetti and J. Walsh of Memphis are interested. It is estimated that between \$500,000 and \$1,000,000 will be invested.

Memphis—Planing Mill.—Bennett Lumber Co. will erect planing mill.

Memphis—Real Estate.—Chas. B. James Land & Investment Co. has been incorporated by Charles B. James, Samuel Morrow and Thomas H. Gothard; capital \$12,000.

Mt. Pleasant—Cotton Gin and Grist Mill.—Tabb & Davis will rebuild cotton gin and grist mill reported burned last week at a loss of \$4000; structure to be 40x60 feet and cost \$3000. John A. Tabb is engineer in charge.*

Nashville—Distillery.—It is reported that J. C. Barnes of Double Springs, Tenn., will establish a distillery.

Nashville—Transfer Company.—James W. Price, W. B. Cayce, T. B. Little, M. C. Cayce and A. M. Hagan have incorporated the Price-Cayce-Little Transfer Co., with \$8000 capital.

Nashville—Foundry.—Cumberland Foundry & Manufacturing Co., reported last week as to increase capital from \$10,000 to \$50,000, has added a new cupola to plant with a melting capacity of from 16,000 to 17,000 pounds daily, and is adding a sandiron plant with a daily capacity of 10,000 pounds.

Tracy City—Electric-light Plant.—Samuel Werner, Henry Werner, C. E. Werner, Ella Werner and Rose A. Werner have incorporated the Tracy City Electric Light & Power Co., with \$5000 capital.

White Bluffs—Stave Factory.—It is reported that J. B. Harris and Samuel Rawls will establish tight-barrel stave factory.

TEXAS.

Austin—Electric-light and Water Works and Power Dam.—R. O. Deming of the Deming Investment Co., Kansas City, Mo., and Dr. John M. Jacobs of Lansdale, Pa., have made a formal proposition to rebuild the dam across the Colorado river destroyed by flood a few years ago. They offer to assume the bonded indebtedness of the city, amounting to \$1,400,000, and to invest \$500,000 in rebuilding the dam and water-works and electric-light plant in return for a 50-year water and light franchise. The proposition will probably be accepted.

Austin—Gas Plant.—Austin Gas Co., reported last week as to improve and enlarge its plant, will let contract for the erection of new retort house 478 feet 7 inches by 33 feet 5 inches.

Beaumont—Oil Wells.—P. A. Blackburn, Patillo Higgins, D. Call, J. M. Eastman, T. H. Bass and associates have incorporated the Pearl Oil Co., with \$25,000 capital.

Beaumont—Oil Wells.—Chartered: Colonel Towers Co., with \$6000 capital, to prospect for oil and other minerals; incorporators, T. N. Bass, F. W. Freeman, Beaumont, and J. D. Crawford, Marshall, Texas.

Bonham—Mill and Elevator.—Bonham Mill & Elevator Co. has increased capital from \$25,000 to \$50,000.

Collinsville—Manufacturing.—Collinsville Manufacturing Co. has been incorporated by H. E. Moody, T. E. Hopson, Charles H. Moody and Zed R. Porter; capital \$10,000.

Commerce—Grain Elevator.—Commerce Milling & Grain Co. is erecting 100,000-bushel grain elevator.

Dallas—Educational.—Electrical Trades College Co. has been organized, with \$5000 capital, by G. S. Kingsworthy and others.

Duffau—Cotton Gins.—It is reported that B. M. King and T. H. Jordan of Hico, Texas, each contemplate erecting a cotton gin.

Duffau—Cotton Gin.—John Wilson states there is no truth in the report that he is interested in the erection of cotton gin.

Fort Worth—Biscuit Factory.—National Biscuit Co. will build additions and install machinery for doubling the capacity of plant; principal office, Chicago, Ill.

Houston—Real Estate.—Chartered: Hyde Park Improvement Co., with \$50,000 capital, by J. C. Hutcheson, J. C. Hooper, W. I. Williamson, Hyman Levy, H. C. Glenn and associates, to improve 72 acres of land near Houston, subdividing it into a suburb to be known as Hyde Park.

Houston—Sewerage, School Improvements, etc.—City will at once issue \$100,000 of bonds for school purposes, and will call a vote on the issuance of \$200,000 additional for erection of school buildings, construction of sewers and providing for the drainage of the city. Address The Mayor.

Laredo—Irrigation Plant.—Reports state that a \$100,000 company is being organized to establish large irrigation plant, E. A. Atlee being interested.

Llano—Mining.—Incorporated: Bawskeda Mining Co., with \$25,000 capital, by F. W. Blackburn, Beaumont, Texas; J. F. Ware, Milwaukee, Wis.; Ella Adams and John Hackett Adams, Chicago, Ill.

Midland—Water-works.—Midland Water-Works Co. has been incorporated, with \$3500 capital, by H. N. Garrett, E. J. Mumford, C. C. Watson, George D. Elliott and Joe Richard.

Mt. Pleasant—Cotton Gin and Electric-light Plant.—M. Greenspun, J. F. Manly and E. J. Lazarus have incorporated the Greenspun Gin & Electric Co., with \$25,000 capital, to operate a cotton gin and supply electric light and power.

Schulenberg—Telephone System.—Incorporated: Schulenberg Telephone Co., to main-

tain telephone lines in Fayette, Lavaca, Gonzales and Colorado counties; incorporators, W. E. Perlitz, Charles A. Perlitz and John Schumacher; capital \$5000.

Sherman—Electric-light and Power Plant.—J. T. Strickland and associates have purchased the plant of the Sherman Light & Power Co., and will expend about \$50,000 in improvements. W. R. Brents, president Commercial Bank, is also interested.

Stephenville—Dry Goods.—Incorporated: Blakeney Dry Goods Co., by Charles O. Blakeney, George M. Schnabel of Stephenville and J. C. Blakeney of Cleburne, Texas; capital \$15,000.

Taylor—Grist and Corn Crusher.—Holder Lumber Co. contemplates erecting grist and corn crusher.

Texas City—Steamship Line.—Texas City Transportation Co. has been incorporated, with \$2,500,000 capital, to establish and operate a line of steamships between Texas City and the Gulf ports of Mexico; incorporators, C. W. Lewis, Texas City; W. T. Armstrong, Galveston, Texas; A. B. Wolvin, T. J. Davis and L. G. Fisher of Duluth, Minn.

Tyler—Cotton Compress.—Tyler Compress Co. has been incorporated by J. F. Christian, L. L. Jester and Claude Ward; capital \$30,000.

Venus—Cotton Gin and Press.—Dr. Young of Moody, Texas, will erect square-bale gin with a round-bale compress in connection.

Waco—Flour Mill, Corn Mill, Grain Elevator, etc.—H. H. Crouch Grain Co. will erect flour mill, corn mill, grain elevator, etc. Building will be erected 50x150 feet and other buildings later. Flour-mill machinery will not be installed until next fall. About \$50,000 will be invested; Watson & Co., architects.*

Wharton—Warehouse Company.—Wharton County Warehouse Co. of Wharton, Pierce, El Campo and Louise has incorporated, with \$25,000 capital; incorporators, J. W. Leech and H. Nye Haskell of El Campo, Texas, and William Nash, Chicago, Ill.

Wichita Falls—Milling.—Wichita Mill & Elevator Co., recently reported as increasing capital from \$50,000 to \$100,000, has further increased its capital to \$150,000.

VIRGINIA.

Alexandria—Wool Company.—Whiteley Wool Co. has been incorporated, with \$400,000 capital. W. I. Hooper is president and Della Hooper, secretary, both of Poplar Bluff, Mo.; Gardner L. Booth, Alexandria, State agent.

Berkley—Marine Railway.—Bott & Lewis Railway Co. has been organized by B. B. Bott, president; C. B. Gibbs, vice-president; Lee Lewis, secretary-treasurer, and L. Hyslop, Jr., general manager. Company has acquired and will operate the marine railway of Bott & Lewis; authorized capital \$10,000.

Bridgewater—Electric-light Plant.—It is reported that the North River Electric Co. will establish plant for lighting the city. Company is capitalized at \$14,000.

Danville—Water-works Improvements.—City will vote June 14 on the issuance of \$75,000 of bonds for removing and improving water-works plant; Robert Brydon, city clerk.

Emporia—Gin and Warehouse Company.—Meherrin Cotton Gin & Warehouse Co. has been incorporated, with an authorized capital of \$25,000. W. F. Deal is president.

Petersburg—Electric-light Plant.—City is contemplating the erection of electric-light plant. Address The Mayor.

Richmond—Steel Viaduct.—Citizens' Rapid Transit Co. will construct a steel viaduct 2300 feet long and 42 feet wide.

Richmond—Tobacco Factory.—Rucker & Witten Tobacco Co., Martinsville, Va., has purchased at \$100,000 the tobacco factory of W. T. Hancock; will improve and operate it. The plant has an output of 450,000 pounds of tobacco a year.

Richmond—Paper Company.—D. B. Wilson Paper Co. has been incorporated, with \$10,000 capital. B. W. Wilson is president; E. T. Robertson, vice-president, and F. W. Minson, secretary-treasurer.

Stuart—Water-works, Electric-light Plant, etc.—City will open bids June 2 for franchise to construct water-works and electric-light and power plant. Address A. L. Powell, mayor.

Suffolk—Peanut Factory.—Columbian Peanut Co., Norfolk, Va., previously reported as to establish plant at Suffolk, will erect building 50x100 feet, five stories, to cost \$40,000. J. P. Woodley is engineer in charge.*

Tipers—Pickle Factory.—It is reported that the Numsen Vinegar & Pickle Co., 637-639 West German street, Baltimore, Md., has purchased site at Tipers' Wharf on which to erect pickle factory.

Waynesboro—Stave Factory.—Incorporated: Augusta Stave & Lumber Co., with

R. W. Crowder, president; John W. Ellyson, secretary-treasurer, and J. W. Kialling of Toga, Va., superintendent; size of building 60x200 feet; size of power plant 50 horsepower. Company will manufacture staves of all kinds, and about \$25,000 will be invested.*

Wytheville—Coal Mines.—J. R. Short and W. B. Gunter, controlling 1500 acres of coal land in Wythe and Pulaski counties, are installing machinery for developing the tract.

WEST VIRGINIA.

Belington—Steel Plant.—Board of Trade is negotiating for the establishment of steel plant.

Bramwell—Coal-mining Consolidation.—Reference was made last week (under Welch) to the incorporation of the Pocahontas Consolidated Co., consolidating a number of coal-mining properties. The company thus acquires mining plants and 8500 acres of coal land with an annual output of 1,000,000 tons of coal and about 1600 coke ovens. Isaac T. Mann is president; Jenkin Jones, vice-president; J. Walter Graybeal, secretary-treasurer, and James Ellwood Jones, general manager.

Charleston—Coal Mines and Coke Ovens.—Caledonian Coal & Coke Co. has been incorporated, with \$50,000 capital, by Jas. Kay, John Wehrle, V. L. Black, S. R. Buckland and Uriah Baines to develop coal mines and build coke ovens.

Clarksburg—Glass Works.—Clarksburg Opalescent Glass Works has let contract to C. E. Haden, Mineral City, Ohio, for the construction of glass plant and furnace.

Fayetteville—Coal Mines.—Republic Coal Co. has increased capital from \$100,000 to \$150,000 to more extensively develop its property.

Gladwin—Saw-mill.—Raine-Andrews Lumber Co., reported last week as to erect saw-mill, will build double-band mill of 80,000 feet capacity to manufacture hemlock, spruce and hardwoods on 17,000 acres of land owned by the company in Randolph county. Cottages will also be constructed for workmen.*

Huntington—Stave Factory.—Brevard & Woods Stave Co., previously reported incorporated with \$25,000 capital, has completed organization with L. E. Brevard, president; B. F. Brevard, vice-president, and W. D. Woods, secretary.

Huntington—Pottery.—Union Potteries Co., Pittsburg, Pa., has made a proposition to the city to establish the plant previously reported. It is proposed to erect seven kilns at a cost of \$140,000.

Philippi—Oil and Gas Wells.—A. F. Hawkins of Piedmont, W. Va., and associates have incorporated the Piedmont Oil & Gas Co., with \$50,000 capital.

St. Albans—Coal-mining and Lumber-manufacturing.—Coal River Lumber & Coal Co., recently reported incorporated with \$100,000 capital to manufacture lumber, mine coal, etc., will erect plant, and has engaged W. T. Andrews as engineer in charge; branch offices at 27 William street, New York.

Welch—Coal Mines.—Imo Coal & Coke Co. and the McLaren Coal & Coke Co., reported last week as to consolidate, have incorporated as the Oregon Coal Co., with \$100,000 capital. Company is now shipping 400 tons of coal daily, and will have a capacity of 1000 tons. E. J. Howe is manager.

INDIAN TERRITORY.

Adair—Mercantile.—Brock Mercantile Co. has been incorporated, with \$15,000 capital, by W. C. Brock, R. L. Brock and P. G. Brock.

Bartlesville—Water-works.—City has granted franchise to W. E. Mitchell, New York, for water-works, work to begin within 90 days.

Caddo—Oil Wells.—Company has been organized, with J. L. Rappolee, president; W. P. Woods, vice-president, and J. H. Hogan, secretary-treasurer, for the development of oil wells.

Goodwater—Telephone System.—Goodwater Telephone Co. has incorporated, with \$3000 capital. W. J. Whitmore is president, and B. S. Harris, vice-president.

Muskogee—Oil and Gas Wells.—Chas. H. Hammett, Frank C. Henderson, Grant Foreman, James E. Mehlin and Harry Raymond have incorporated the Superior Oil & Gas Co., with \$200,000 capital.

Muskogee—Townsites.—Incorporated: Southwestern Townsite Co., with \$250,000 capital, by J. W. Zevely, H. Van V. Smith, Allison L. Aylesworth, T. Karl Simmons and Geo. C. Butte.

Sapulpa—Natural-gas plant.—Sapulpa Oil & Gas Co. has received franchise to supply the city with natural gas.

Tulsa—Coal Mines.—Incorporated: Howard Coal Mining Co., with \$50,000 capital. John Dermott is president; Thomas J. Roney, vice-

president, and Frank P. Anderson, secretary-treasurer.

Wagoner—Oil and Gas Wells.—Home Oil & Gas Co. has been incorporated, with \$20,000 capital. George H. Ruddy is president; C. C. Palmer, vice-president; Fred. Parkinson, secretary, and Ernest E. Smith, treasurer.

OKLAHOMA TERRITORY.

Blackwell.—Water-works Improvements.—City has engaged Burns & McDonnell, engineers, Kansas City, Mo., to prepare plans and estimates for increased water supply.

Guthrie—Oil and Gas Wells.—Bessie Oil & Gas Co. of Guthrie and Tulsa, I. T., with \$100,000 capital, by Carl H. Havighorst, John J. Tearney, John Selstrom, J. R. Cuttingham, Michael Cassidy and associates.

Lowe (not a postoffice)—Cotton Gin.—United Farmers' Gin Co. has been incorporated, with \$3500 capital, by F. V. Miller, F. Weeks, Zan Atwell, W. P. Goble of Lowe and M. J. Westover of Chandler, O. T.

Oklahoma City—Safe and Lock Company. Gus and V. K. Tallafiero, W. J. Pettie and George A. Hunter have incorporated the Oklahoma Safe & Lock Co.

Oklahoma City—Street Paving.—City will pave its streets and avenues, and bids are asked until June 6; T. A. Blaise, city clerk.*

Oklahoma City—Real Estate.—Incorporated: Oklahoma Land Co. of Oklahoma and Tulsa, I. T., with \$400,000 capital; incorporators, S. L. Johnson, John S. Hunter and T. H. Shipp.

Oklahoma City—Townsite.—Incorporated: Oklahoma & Oregon Townsite Co. of Oklahoma City, Portland and Klamath Falls, Ore., with \$75,000 capital; incorporators, J. E. Loy, F. T. Cook and L. G. West.

Oklahoma City—Development Company.—Military Park Development Co. has been incorporated, with \$25,000 capital; incorporators, I. M. Putman, J. Paul Jones and W. H. Phillips.

Shawnee—Oil and Gas Wells.—Monarch Oil & Gas Co. of Shawnee, Pittsburg, Pa., and Chicago, Ill., has been incorporated by Chas. E. Wells, J. W. Beazley, James W. Kier, William L. Pollock and George A. Sallabury; capital \$1,000,000.

BURNED.

Ashland, Ky.—Vansant, Kitchen & Co.'s band-saw mill; loss \$50,000.

Ashland, Ky.—Printing plant of Ashland Daily Independent; loss \$15,000.

Charlottesville, Va.—Edwin O. Meyer's electric-light and power plant; loss \$8000.

Dempsey, W. Va.—R. E. Amick's saw and grist mill; loss \$3000.

Fairfax, Ga.—J. R. & T. Bunn's saw-mill, dry-kiln, planing mill, etc.; loss \$30,000.

Glenville, W. Va.—Goff Hotel; loss \$15,000.

Little Rock, Ark.—The Little Rock Hoop Co.'s plant; loss \$7500.

Madison, Md.—Bleak House, owned by Benjamin L. Brooks; loss \$5000.

Merrill, Md.—E. Merrill & Sons' lumber mill.

Montgomery, Ala.—Alabama Compress & Storage plant; loss \$60,000.

New Orleans, La.—Louis P. Rice & Co.'s harness and saddlery factory, loss \$200,000; Simonds Manufacturing Co.'s mill-supply house, building owned by Abe Mayer, loss \$75,000; Mieg, Brady & Lincoln Woodware Co.'s plant, building owned by Tulane Educational Fund, loss \$50,000; business building owned by J. A. Braselmann, loss \$30,000; two buildings owned by Tulane Educational Fund; building owned by Dr. G. K. Pratt.

Newport, Ark.—Iron Mountain Railroad freight sheds and grain elevator; E. Fisher, engineer bridges and buildings, Missouri Pacific Railway, Pacific, Mo.

Orange, Miss.—W. S. Carter & Co.'s planing mill.

Oviedo, Fla.—Bell Bros.' saw-mill.

Ripley, Tenn.—Ripley Roller Mills.

Rome, Ga.—Thomas Bridge's saw-mill; loss \$1500.

Sandersville, Ga.—Four brick buildings owned by Mrs. S. B. Jones.

Staunton, Va.—Lee Jenkins and R. Moore Brown's saw-mill; loss \$3000.

St. Jo, Texas.—Champion Roller Mills; loss \$20,000.

Sylvia, Tenn.—W. H. Leonard Stone Co.'s mill; loss \$1000.

Taylor, Texas.—Evans-Burke Company's planing mill and cotton gin; loss \$6000.

Teek, Va.—Fox & Floyd's saw-mill.

Unadilla, Ga.—Duncan House, owned by Mrs. J. E. Duncan; loss \$4000.

Yazoo City, Miss.—It has not been possible to give as yet an accurate list of the buildings destroyed in the fire of last week or the

names of their owners. Details of the new structures, some of which will be fireproof, will be announced from time to time in the Building Notes column as reported.

BUILDING NOTES.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Abbeville, Ga.—School Building.—The city will erect extension to building of the Georgia Normal College and Business Institute to cost \$6000.

Agricultural College, Miss.—College Building.—Board of Trustees of Agricultural and Mechanical College has accepted plans by R. H. Hunt, Chattanooga, Tenn., for the erection of \$30,000 engineering building previously reported.

Annapolis, Md.—Hospital.—John Gill & Son, Cleveland, Ohio, were the lowest bidders at \$230,000 for the construction of hospital at the Naval Academy. Ernest Flagg, New York, prepared the plans.

Austin, Texas.—Hospital Addition.—Wattinger & Ledbetter have contract to construct proposed \$5000 addition to State Insane Asylum to be used as department of Pasteur treatment.

Birmingham, Ala.—Gymnasium Building.—Young Men's Christian Association has awarded contract to A. J. Krebs Company for the erection of gymnasium building, two stories with basement, 51.6x90 feet, containing bathrooms and swimming pool; cost \$17,806.55.

Birmingham, Ala.—Association Building.—Birmingham Y. M. C. A. contemplates erecting building to cost \$60,000.

Birmingham, Ala.—Bank Building.—Alabama Penny Loan & Savings Co. will erect brick building for banking purposes.

Bramwell, W. Va.—Residence.—Isaac T. Mann is having plans prepared for a \$20,000 residence, and bids for construction will be received until June 15.

Bristol, Tenn.—Store Building.—Dr. J. F. Hicks has let contract to the Crowell Construction Co. for the erection of two-story brick and stone store building, 60x120 feet.

Caldwell, Texas.—Store Building.—Riley & Snook have let contract to J. R. Hartgraves for the erection of one-story brick store building 30x100 feet.

Cambridge, Md.—College Improvements.—Henry C. Patchett has contract at \$12,977 for proposed improvements to female seminary, including the building of additional wings, etc.

Carrollton, Miss.—Courthouse.—Supervisors of Carroll county will consider plans and specifications for \$30,000 courthouse.

Cartersville, Ga.—Church.—The Baptist Church, John E. Barnard, pastor, will erect brick building, 61x112 feet, equipped with gas and electric-lighting fixtures, heating equipment, etc., to cost \$15,000; J. W. Golucke & Co. of Atlanta, architects. This building previously reported.*

Columbus, Ga.—School.—C. B. Gibson, secretary school trustees, will open bids May 31 for the erection of Eighth Ward school building. Plans on file at office of T. W. Smith & Co., architects, Garrard Building. Certified check for \$100 must accompany each bid. Usual rights reserved.

Crowley, La.—Offices and Warehouses.—Advance Threshing Co. will rebuild offices and warehouses recently burned.

Cumberland, Md.—Bank Building.—Third National Bank, Harry E. Weber, president, has purchased the Daughtrey building at \$35,000 and will remodel for banking purposes.

Dallas, Texas.—Business Building.—J. F. O'Connor has let contract for the erection of three-story brick building to cost \$35,000.

Dallas, Texas.—School.—St. Matthew's Preparatory School, W. I. Yopp, president, will erect school building to cost about \$7500.

Des Ark, Ark.—Courthouse.—F. H. Stewart of Newport, Ark., has been awarded contract for the erection of courthouse for Prairie county. The structure will be 31.6x55.7 feet, stone finish front and slate roof, surmounted by a large clock and containing vault for records.

Edgewater, Va.—Dwelling.—J. G. McNeal is having plans prepared for a \$12,000 residence.

Elizabeth City, N. C.—Hotel Improvements.—E. F. Aydielt will remodel the Albemarle Hotel.*

El Paso, Texas.—Depot.—El Paso Union Passenger Depot Co. has had plans prepared by D. H. Burnham & Co. of Chicago, Ill., for the erection of \$100,000 union passenger station.

El Reno, O. T.—Opera-house.—It is reported that H. G. Toler of Wichita, Kan., will erect opera-house.

Fayetteville, Ark.—Bank and Hotel.—A. M. Byrnes has contract to erect proposed \$30,000 bank building and hotel.

Gentry, Ark.—Bank.—The State Bank of Gentry contemplates erecting bank building, and is seeking plans for the front.

Grafton, W. Va.—Bank and Office Building. Grafton Banking & Trust Co. has let contract to Elliot & Winchel, Clarksburg, W. Va., at \$32,900 for the erection of bank and office building previously reported. Holmboe & Lafferty, Clarksburg, W. Va., prepared the plans.

Greenville, Miss.—Hotel Improvements.—Smith & Turner, proprietors of Cowan Hotel, are having plans prepared for the erection of addition to cost about \$20,000.

Greenville, Miss.—Home.—J. F. Barnes & Co. have contract to erect proposed \$20,000 home for local lodge B. P. O. E.

Greenville, Texas.—School.—City will vote on the issuance of \$15,000 of bonds for the erection of school building. Address The Mayor.

Hazlehurst, Miss.—Bank and Office Building.—Bank of Hazlehurst contemplates erecting new bank building; also three-story brick business building.

Hopkinsville, Ky.—Jail.—Christian county has awarded contract to the Pauley Jail & Building Co. of St. Louis, Mo., for the erection of jail at a cost of \$18,497.50. This building was previously mentioned.

Houston, Va.—Courthouse Improvements.—Supervisors of Halifax County, Thomas Easley, clerk, Houston, Va., will open bids June 25 for remodeling county courthouse after plans and specifications on file in office of county clerk, Houston, or R. S. Barbour, South Boston, Va.; also at office of B. F. Smith Fireproof Construction Co., Room 503, Pope Building, Washington, D. C. Certified check for \$200 must accompany each bid. Board reserves usual rights.

Houston, Texas.—Hospital, Chapel and Dormitory.—St. Joseph's Infirmary will erect hospital, chapel and dormitory, 90x70 and 60x50 feet; mill construction; steam-heating vacuum system, electric and gas lighting, electric elevators; cost \$55,000; Green & Swartz, architects; Gauthier & Mitchell, contractors. This building recently referred to.

Houston, Texas.—Business Building.—C. J. Koehler has had plans prepared for a three-story building, 50x100 feet, of white-enameled brick, to cost \$20,000.

Huntsville, Ala.—Business Building.—Wm. F. Struve, Jr., will erect building at Clinton and Washington streets to cost \$15,000.

Huntsville, Ala.—Business Building.—Wm. F. Struve, Jr., will erect three-story business block.

Jacksonville, Fla.—Dwelling.—Dr. W. M. Bostwick will erect frame dwelling, two stories high, with plumbing, electric lighting and heating equipment, at a cost of \$8000.

Keyser, W. Va.—School.—City has voted affirmatively the \$20,000 bond issue previously reported for the erection of school building. Address The Mayor.

Kountze, Texas.—Jail.—Andrew J. Bryan, 905-907 Hennen Building, New Orleans, La., is preparing plans for proposed jail, to cost about \$18,000.

Kountze, Texas.—Courthouse.—County Commissioners of Hardin county will open bids June 23 for the erection of courthouse, in accordance with plans and specifications on file at office of county clerk, Kountze; also at office of Andrew J. Bryan, architect, 905 Hennen Building, New Orleans, La.; copies furnished on deposit of \$50. Certified check for \$500 must accompany each bid and be addressed to Jack Dies, county judge. Proposal sheets furnished on application to architect. For further information apply to Hon. Jack Dies, Kountze, Texas.

Lewisburg, Tenn.—Church.—Lewisburg Presbyterian Church is erecting \$6000 edifice to replace structure recently burned.

Little Rock, Ark.—Agency Building.—The Anheuser-Busch Brewing Co. has awarded contract to the Globe Construction Co., St. Louis, Mo., for the erection of a pressed-brick building with granite trimmings, 91x225 feet. The structure will have space for the general offices, bottled beer and keg departments and wagon sheds.

Louisville, Ky.—Office Building.—Directors of Cave Hill Cemetery will erect office building two stories high, to cost \$30,000.

Lyons, Ga.—Store Building.—Lyons Trading Co. has awarded contract to J. L. Huggins for the erection of store building 115x128 feet to cost \$14,000.

Macon, Ga.—Hospital Annex.—Ladies' Auxiliary Society of the City Hospital will erect hospital annex to cost \$8000.

Macon, Ga.—Park Buildings.—The city has awarded contract to Ellis & Denny for the erection of building 50x300 feet at a cost of \$7000; round building 100 feet in diameter at a cost of \$6300, and machinery hall to cost \$1600, all of brick.

Manassas, Va.—Hotel.—Robert Portner has let contract to John A. Cannon & Son for the erection of \$30,000 hotel on Bunker Hill.

Memphis, Tenn.—Office Building.—Tennessee Trust Co. will erect 15-story fireproof office building to cost \$300,000, and bids are now being invited; James F. Hunter, general manager.

Memphis, Tenn.—Flats Building.—L. T. Lindsey has contract to erect the Cannon Flats at 115 Adams street after plans by Chighizola & Harker; structure to be of brick and stone, and cost \$20,000.

Meridian, Miss.—Cathedral.—Scottish Rite Masons contemplate the erection of three-story cathedral.

Mineral Wells, Texas.—Depot.—Weatherford, Mineral Wells & Northwestern Railway will erect depot of stone, brick, concrete and iron 200 feet long. P. E. Bock, Weatherford, Texas, is general manager.

Montgomery, Ala.—Business Building.—J. G. Whitfield has purchased site on which to erect three-story brick business building.

Murfreesboro, Tenn.—School.—W. C. Henry and J. E. Thompson have contract to erect school building reported last week; W. L. Logan prepared the plans; to cost \$12,000.

Nashville, Tenn.—School and Apartment-house.—A. G. Brown has permit to erect two-story brick school building and apartment-house; cost \$21,500.

New Orleans, La.—Barrack Buildings.—Sealed proposals in triplicate will be received by B. T. Clayton, Q. M., U. S. A., New Orleans, La., until June 15 for constructing following frame buildings, including plumbing and electric wiring, at Jackson barracks: Barrack, detached lavatory for barrack, detached messroom and kitchen for barrack, one bakery and ovens, single set N. C. S. O. quarters, guardhouse. United States reserves usual rights. Information on application.

Newton, Miss.—Business Building.—J. M. Hoyer has let contract to C. H. Dabbs, Meridian, Miss., for the erection of his proposed two-story brick business building, 45x100 feet, to cost about \$12,000.

Normal, Ala.—Library Building.—Agricultural and Mechanical College, W. H. Council, president, has awarded contract to Dan Brandon (negro), Huntsville, Ala., for the erection of \$10,000 library building previously reported.

Orange, Texas.—Opera-house.—Orange Theater Co. has let contract to H. W. Bailey, Beaumont, Texas, for the construction of its proposed opera-house. Howard & Fritch, Beaumont, Texas, have contract for painting and decorating.

Paducah, Ky.—Temple.—Colored Masonic Stock Co., reported incorporated last week to erect Masonic temple, will erect three-story building, 72x56 feet, to cost \$10,000. B. B. Davis is engineer in charge.

Parkersburg, W. Va.—Hotels, etc.—Parkersburg Hotel Co. has been incorporated, with \$50,000 capital, to own and operate hotels, etc.; incorporators, R. T. Stealey and others.

Pikeville, Ky.—Store Building.—James Hatcher, John Auxler and John P. Smith will erect store building at a cost of \$20,000.

Pensacola, Fla.—Hotel.—The Chamber of Commerce will consult with capitalists relative to the establishment of a hotel to have about 200 rooms.

Raleigh, N. C.—College Building.—State Board of Agriculture has accepted plans by Hook & Sawyer, Charlotte, N. C., for proposed building for Agricultural and Mechanical College.

Rayville, La.—Bank Building.—J. J. Glanfield has contract to erect two-story bank building, 25x50 feet, for the Rayville State Bank to cost \$5000.

Roanoke, Va.—Business Building.—John McCarthy will erect three-story building to be occupied by the Roanoke Music Co.

Roanoke, Va.—Depot.—Reports state that the Norfolk & Western Railroad, L. E. Johnson, president, will erect \$100,000 depot.

Salisbury, Md.—School.—It is reported that a \$20,000 high-school building will be erected. A. J. Benjamin can be addressed.

San Angelo, Texas.—School.—City will vote June 23 on the issuance of \$20,000 of bonds previously reported for erecting and improving school buildings; C. H. Powell, mayor.

San Antonio, Texas.—School.—R. O. Langworthy has contract at \$9330 for the erection of school building and additions.

Santa Anna, Texas.—School.—City will issue \$7000 of bonds for the erection of school building. Address The Mayor.

Savannah, Ga.—Hotel.—It is reported that the Chicago Construction Co. of Chicago, Ill., will erect a large hotel in Savannah and several other cities.

Shawnee, O. T.—School Buildings.—Higgins & Furnas, reported last week as having contract to erect school buildings, have contract to erect three buildings of brick and stone, 70x96 feet, heated by steam, electric lights and to cost \$21,000 each. Contract for heating has been let to Rash Plumbing Co.

Shreveport, La.—Parsonage.—First Presbyterian Church has purchased site on which to erect \$5000 parsonage. Address The Pastor.

Spray, N. C.—Mill Building.—Spray Woolen Mills will erect a 200-foot addition, one story high, to be used for offices, packing and inspecting rooms and shipping department.

Swainsboro, Ga.—School Building.—The town will erect school building to cost \$12,000. Address The Mayor.

Swainsboro, Ga.—School Building.—The city will let contract June 15 for the erection of school building costing about \$12,000 containing 12 classrooms and auditorium and equipped with steam-heating plant; Louis F. Goodrich, Augusta, Ga., architect. Mention of this building was previously made.

Taylor, Texas—City Hall.—City has accepted plans by Henry Strave for the erection of \$30,000 city hall, previously reported.

Teneha, Texas—School.—N. B. Brown, superintendent, will open bids June 6 for constructing two-story brick school building, to cost about \$7000. Plans and specifications may be seen at office of superintendent. Certified check for \$300 must accompany each bid; usual rights reserved.

Thomasville, Ga.—Lodge Building.—Thomasville Lodge of Elks will erect frame building, 50x60 feet, equipped with hot-air furnace and electric-lighting fixtures, to cost \$5000.

Union, S. C.—Library.—Granby & Jordan, Greenville, S. C., have contract at \$9625 for building proposed Carnegie Library.

Vicksburg, Miss.—Baths, Gymnasiums, etc.—Mann Building & Manufacturing Co. has contract to build baths, gymnasiums and make other improvements at the B. B. Club.

Warrenton, Ga.—Church.—W. C. English will open bids June 20 for the erection of church building, plans and specifications of which may be seen at the Chronicle office.

Washington, D. C.—Administration Building, Hospital, etc.—Rullman & Wilson, Lafayette and Mt. Royal avenues, Baltimore, Md., have contract to erect proposed administration building at Soldiers' Home, also addition to the Barnes Hospital at the home; total cost \$26,000.

Washington, D. C.—Residences.—S. Lemon Hoover has purchased site on which to erect \$15,000 residence.

Washington, D. C.—Residences.—W. R. Lipscomb & Co. have contract to erect residence for Charles L. Fitzhugh of Pittsburg, Pa., after plans by Wood, Donn & Deming. Same contractors have contract to erect residence for Edward Mitchell after plans by Bruce Price & de Silbaur, architects, 1123 Broadway, New York.

Washington, D. C.—Apartment-house.—Kenesaw Apartment-house Co. has had plans prepared by George W. Stone for the erection of seven-story fireproof apartment-house. Frank L. Averill is structural engineer.

Wheeling, W. Va.—Depot.—Reports state that the Baltimore & Ohio Railroad will expend \$10,000 in improvements to its freight station, including the enlarging of freight station, increasing of platform capacity, etc.; C. S. Sims, general manager, Baltimore, Md.

RAILROAD CONSTRUCTION.

Railways.

Anderson, S. C.—The Anderson Traction Co. has organized, electing officers as follows: J. A. Brock, president and treasurer; F. G. Brown, vice-president; Dr. George E. Coughlin, general manager; directors, J. A. Brock, Dr. George E. Coughlin, S. M. Orr, J. J. Fretwell, R. S. Hill, B. F. Mauldin, R. E. Ligon, D. A. Ledbetter, Fred G. Brown, W. F. Cox, D. P. McBrayer, C. S. Sullivan. Ties and trolley poles reported to have been ordered. The officers, who are the executive committee, are authorized to order other material. Grading to begin in two or three weeks. A line from the courthouse down Main street to the city limits and then probably on to the Orr Mills is decided upon.

Baltimore, Md.—The Western Maryland Railroad has begun tracklaying on its tide-water extension from Walbrook to the Spring Gardens.

Brooksville, Fla.—The Brooksville & Hudson Railroad is reported to have completed its line to Hudson. M. F. Amorous is president, and he is also president of the Aripka Mills Co.

Cincinnati, Ohio.—The Queen & Crescent Route will, it is reported, spend about \$500,000 for improvements in the way of new tracks, new bridges, etc., between Cincinnati and Chattanooga. G. B. Nicholson is chief engineer.

Columbus, Miss.—The Columbus, Memphis & Pensacola Railroad is reported to have completed a survey from Columbus to Amory, Miss., 34 miles. Newnan Cayce is president. A branch line to Aberdeen, Miss., is also said to have been located. J. S. Foster is engineer.

Dalton, Ga.—The Alaculsky Lumber Co. writes the Manufacturers' Record that it does not expect to complete the Dalton & Alaculsky Railroad this summer. The press report that it would be completed immediately was made without authority.

Denison, Texas.—The Frisco system is reported to have begun rebalasting 200 miles of main line from Denison to Sapulpa, I. T. The embankments will be widened and all the cuts improved.

Denver, Col.—President Frank Trumbull of the Fort Worth & Denver City Railway, writes the Manufacturers' Record that there is no truth in the press report that the company's line will be extended to the Gulf of Mexico.

Durant, I. T.—The Valiant Hardwood Lumber Co. will, it is reported, build a tramroad from Valiant south to the Red river, 12 miles.

Fayetteville, W. Va.—Reported that the Gallego Coal & Land Co. will immediately open bids for a five-mile extension of the Paint Creek Railroad.

Florence, Ala.—The Sheffield Company's electric railway, now in operation as far as the Southern Railway bridge on the south side of the river, is now putting the rest of its line in order to begin operations on the north side.

Fort Smith, Ark.—F. A. Mottor, chief engineer of the Midland Valley Railroad, is reported as saying that the line from Greenwood, Ark., to Muskogee, I. T., is completed and that construction is under way from Muskogee to Tulsa, I. T. Ebey & Stocker and Maney Bros. are doing the grading, and Kohrmann & Murray, Kemper Building, Kansas City, are the bridge contractors. The line will probably be completed October 1.

Gurdon, Ark.—An officer of the Kansas Southwestern Railway informs the Manufacturers' Record that it will probably be a year or two before the proposed extension to Caddo Gap is constructed.

Hattiesburg, Miss.—The Mississippi Central Railroad has filed an amended charter giving its eastern terminus as Scranton, Miss., and its western terminus as Natchez. The line now runs west from Hattiesburg to Silver Creek, 55 miles, the latter point being about 35 miles east of Natchez. Scranton is about an equal distance southeast of Hattiesburg. F. L. Peck is president.

Houston, Texas.—The Houston-Galveston Interurban Railway, recently incorporated to build a line from Houston to Galveston, will, it is reported, build branches to La Porte, Seabrook, Webster and Alvin.

Kalamazoo, Mich.—Mr. C. D. Fuller, concerning the report that he will build a railroad at or near Smokemont, N. C., writes the Manufacturers' Record that plans for the line are not yet matured.

Laurel Fork, Va.—Mr. C. H. Stanley informs the Manufacturers' Record that the Virginia & Carolina Railway, from Roanoke to Mount Airy, N. C., will be built by the Engineering Company of America, New York, and that it has promised to have the line completed in 12 months.

Lexington, Ky.—President Chas. J. Bronston of the Fayette Interurban Company, is reported as saying that work will begin within a few days on the proposed electric railway from Lexington to Versailles. Capital has been secured in Chicago, and the line will eventually be extended to Frankfort.

Little Rock, Ark.—Reported that the survey for the St. Louis, Little Rock & Gulf Railroad has been completed from Little Rock to Sheridan. H. S. Shaner is president, and H. F. Fielder, chief engineer. It is said that contracts will be let soon.

Madisonville, Ky.—L. F. McLaughlin, it is reported, has made a survey for a railroad from Madisonville to Central City, Ky., about 30 miles. Chicago capital is said to be interested.

McBee, S. C.—The Lynch River Tramway Co. has been chartered to build a line from McBee into Kershaw county. J. H. Diggs is president, and W. H. Webster, secretary and treasurer.

Meridian, Texas.—Mr. P. A. McCarthy,

vice-president and general manager of the Gulf & Northwestern Railway, writes the Manufacturers' Record that the location, construction and equipment of the line will be under his immediate charge. The road will run from Waco via China Springs, Bosqueville, Meridian, Iredell, Duffau, Stephenville, Huckaby and Exray to the Texas coal fields. Steps are being taken for the immediate construction of the line, which will be of standard gauge; general offices at Meridian. The officers are: W. M. Knight, president; P. A. McCarthy, vice-president and general manager; N. R. Morgan, secretary, and C. W. Tidwell, treasurer.

Mobile, Ala.—A. N. Bullitt, chief engineer of the Mobile, Jackson & Kansas City Railroad, is quoted as saying that C. D. Smith & Co. of Memphis have been awarded the grading contract from Newton to Pontotoc, Miss.

Moss Point, Miss.—Messrs. W. Denny & Co. inform the Manufacturers' Record that they will not take up the matter of construction of their proposed railroad until all the right of way has been secured. The press report that the survey was completed is incorrect.

Mt. Sterling, Ky.—The Mt. Sterling Short Line Railroad Co. has been incorporated to build a line nine miles long. Among those interested are J. M. Pickrell, W. M. Beckner, E. S. Jouett, Lucian Beckner and B. R. Jouett of Winchester. The line is to connect Mt. Sterling with the Lexington & Eastern Railway.

Nacogdoches, Texas.—W. B. Worrall is chief engineer of the Nacogdoches South-eastern Railroad, on which 12 miles are under construction and track is being laid. Entire line is to be 35 miles long.

Nashville, Tenn.—The Tennessee Central Railroad has, it is reported, awarded a contract to M. N. Elkan of Knoxville to build the Hamilton-Harrison-street extension, which will be more than two miles long.

New Orleans, La.—President G. R. Turner of the Louisiana Sugar Belt Railway, 706 London & Globe Building, is reported as saying that line is under construction from Thibodaux south 40 miles to the proposed terminal, three and one-half miles south of Cut-off. The line may be extended to Grand Isle, about 30 miles.

Pikeville, Ky.—The Elk Horn & Beaver Valley Railway, lately incorporated, will, it is reported, build a line from a point on Beaver creek in this (Floyd) county through Knott county to Pound Gap in Letcher county, 60 miles.

Porter, Clay Co., W. Va.—In a letter to the Manufacturers' Record the Clay Lumber Co. writes that it is building a private logging road, but says the line is only temporary.

Prescott, Ark.—Reported that the Prescott & Northwestern Railway is surveying for an extension to Murfreesboro. W. N. Bemis is president.

Redemption, Ark.—The Arkansas River & Southern Railway Co. has been chartered to build a line 20 miles long from Redemption, in Perry county, to Maumelle, in Pulaski county. The directors are Gordon N. Peay, T. G. Bragg, B. Thurston, R. B. Edgar and C. Ketcham.

Rison, Ark.—The Rison & Mt. Elba Railway Co. has been chartered to build a line from Rison to Mt. Elba, 12 miles. The directors are J. I. Porter, A. R. Porter, R. E. Johns, J. F. Swanson and E. W. Farrar.

Roanoke, Va.—Mr. Charles S. Churchill, chief engineer Norfolk & Western Railway, writes the Manufacturers' Record that the press report of the company's double tracking between Kenova and Portsmouth is not correct. "We are," he continues, "gradually building short sections of second track in that vicinity, but not for the whole distance between Portsmouth and Kenova. At the present time we have double track for several miles east of Portsmouth, and it is very probable that short sections of second track will be built in the vicinity of Ironton and Hanging Rock before the end of the year. This is at a point where our bridges have already been made double track."

San Antonio, Texas.—R. E. Hardaway, chief engineer of the San Antonio & Aransas Pass Railway, is reported as saying that work may be resumed on the Brownsville extension, on which construction ceased May 17, when 37 miles of track were laid from Alice to Falfurrias. The line is to be from Alice via Hidalgo to Brownsville, 167 miles.

Savannah, Ga.—The South Atlantic & Mexican Gulf Railway Co. has applied for a charter to build a line 35 miles long from Savannah, with headquarters here, the road to run through the counties of Chatham, Bryan, Liberty, Tatnall, Appling, Coffee, Berrien, Brooks, Thomas and Decatur in Georgia, and the counties of Leon, Gadsden, Waukula, Liberty, Franklin, Calhoun and Wash-

ington in Florida, and thence to a deep-water port on the Gulf of Mexico. Those interested are D. G. Purse and D. G. Purse, Jr., John J. McDonough and E. M. Frank of Savannah, P. M. Comas and C. W. Dean of Appling county, F. L. Sweat and John McLean of Coffee county and W. J. Rogers and J. W. Purdum of Berrien county. The route will be via Douglas, Willacoochee, Nashville, Sparks, Moultrie and Thomasville, Ga. Mr. Purse, Sr., writes the Manufacturers' Record that the work has progressed most satisfactorily, and every detail will be covered and provided for before the officials are named. He adds: "The money for its construction has been at our command for 12 months past."

Sedgwick, Ark.—The Cache Valley Railroad has filed an amendment to its charter to build a branch 27 miles long from Walnut Ridge to Paragould, Ark. H. A. Culver is general manager.

St. Louis, Mo.—Reported that the Frisco system will build an extension from Grove, I. T. J. F. Hinckley is chief engineer of construction, 800 Fullerton Building.

St. Louis, Mo.—Mr. R. W. Griswold, vice-president and auditor of the Perla Northern Railroad, 1605 Chemical Building, writes the Manufacturers' Record that the company's line will be built from Perla, Ark., on the Iron Mountain Railroad, 38 miles below Little Rock, and will run northwest about 22 miles to Whittington in Garland county. It will cross the Hot Springs line of the Choctaw, Oklahoma & Gulf near Butterfield, Ark., and the Little Rock, Hot Springs & Western at Lonsdale, Ark. No engineer yet selected. Construction will be done by day labor. The road is for the Malvern Lumber Co.

St. Louis, Mo.—Reported that the Frisco system will build its New Orleans line into Pascagoula, Miss. J. F. Hinckley is chief engineer of construction, 800 Fullerton Building.

St. Louis, Mo.—Reported that the St. Louis, Kansas City & Colorado Railway (Rock Island system) has completed its extension to Kansas City.

Texarkana, Ark.—Mr. E. W. Frost of Texarkana, president of the Red River Lumber Co., in a letter to the Manufacturers' Record says: "The Red River Valley Railroad is only a logging road, and we chartered to better handle our business."

Thomasville, N. C.—Reported that a railroad will be built from Thomasville to Denton, 20 miles. Capt. M. L. Jones and others are interested.

Waco, Texas.—A report says that the Texas Central Railroad will build an extension from Stamford to Amarillo, Texas, more than 100 miles, and another extension from Dublin to the Thurber coal mines, about 35 miles. C. Hamilton is general manager.

Washington, D. C.—An official of the Southern Railway informs the Manufacturers' Record that, so far as he knows, there is no truth in the report that the Danville & Western Railway will be extended.

Street Railways.

Baltimore, Md.—The Maryland Electric Railway Co. has applied to the city council for a franchise to build lines in Baltimore. James B. Guyton and W. Irvine Cross, attorneys, represent the company, which is said to be composed almost entirely of Philadelphia, New York and Northern capitalists. A double-track line or lines on 25 miles of streets is proposed. Charles A. Porter of Philadelphia, Wm. L. Walker, 111 Fifth avenue, New York, and Clarence Wolf of Wolf Bros., bankers, Philadelphia and New York, are said to be interested.

Chattanooga, Tenn.—The Chattanooga Waft Co., recently incorporated, proposes to build a double-track cable tramway from Chattanooga to Cameron Hill in Boynton Park. The line will be about 3900 feet long. Other lines are to be built in coal regions of Waldens Ridge.

Cleburne, Texas.—Application has been made to the city council for a street-railway franchise by Israel Dreeben, R. I. E. Dunn and Mr. Sutton of Dallas in the name of A. Stein and associates.

Danville, Va.—The Danville Street Railway & Electric Co. proposes to make an extension on Union street.

Monroe, La.—Reported that a municipal electrical railway system will be established between Monroe and West Monroe.

Richmond, Va.—The Citizens' Rapid Transit Co. is reported to have awarded contracts and will begin construction within 10 days on its line from Brook avenue to Fulton. John C. Robertson is president.

Waco, Texas.—The Citizens' Street Railway Co. has under consideration a plan to extend its line to East Waco.

MACHINERY, PROPOSALS AND SUPPLIES WANTED.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted.

Air Compressor.—Kent & Morrison, Security Bank Building, 1107½ E. Main street, Richmond, Va., want new or second-hand belt-driven air compressor with capacity of 100 cubic feet of free air per minute.

Alcohol Engines.—See "Engines."

Art Glass.—See "Building Material."

Automobile.—Henry Monk, Pensacola, Fla., wants new or second-hand 25-horse-power freight automobile to use in delivering lumber, brick, stone, etc. State price f. o. b. Pensacola, exact condition, age, name of maker, and enclose photo or blueprints.

Barrel-factory Equipment.—Griff Glover, Bloomfield, Mo., wants machinery and equipment to manufacture slack barrels, heading and hoops, including engines, boilers, tanks, pumps, kilns, vats, etc.

Belting.—Augusta Stave & Lumber Co., Waynesboro, Va., wants belting.

Boiler.—Piedmont Electric Co., Asheville, N. C., wants price on second-hand 30 or 35-horse-power locomotive-type boiler, complete with stack and fittings, delivered at Waynesville, N. C.

Boilers.—E. H. Partridge, 1305 F street N. W., Washington, D. C., is in the market for 5 or 10 second-hand boilers; must be over 100 horse-power.

Boilers.—See "Water-works Equipment."

Bottling Machinery.—Georgia Medicine & Bottling Co., Box 8, Atlanta, Ga., wants prices on bottling machinery.

Brick Machinery.—G. E. Pitcher, Bay St. Louis, Miss., wants to correspond with manufacturers of brick machinery.

Brick Machinery.—Miller-Burns Fire-Brick Co., Chattanooga, Tenn., will buy brick machinery.

Brick Machinery.—J. B. Perry, Grenada, Miss., wants hardening cylinder. (This item mentioned erroneously under Machine Tools last week.)

Bridge Construction.—C. A. Sedinger, superintendent of bridges and public works, Bartlett, Tenn., will open bids June 30 for construction of bridge across Hatchie river. A \$50 forfeit must accompany each bid. Usual rights reserved.

Building Equipment and Supplies.—Sullivan & Sons Co., builders, 17 East Saratoga street, Baltimore, Md., want subbids on the following building materials for the three warehouses for Rosenberg, Burgunder and Hamburger, on which they are bidding: Brick, terra-cotta, stone, iron and steel, plumbing, plastering, roofing, skylights, lumber, timber and glass.

Building Equipment and Supplies.—Henderson & Co., Ltd., builders, 213 West Fayette street, and William Steele & Sons, builders, 17 West Saratoga street, Baltimore, Md., want subbids on the following building materials for the nine warehouses for the Johns Hopkins Hospital, on which they are bidding: Brick, stone, architectural terra-cotta, iron and steel work, roofing, fire-escapes, metal frames and sashes, wireglass, terra-cotta and reinforced concrete work, mill work, metal work, plastering, painting and glazing, glass. Plans and specifications for these warehouses can also be seen in the Philadelphia offices of the above firms.

Building Material.—Thomasville Lodge of Elks, Thomasville, Ga., wants prices on plumbing and heating equipment.

Building Material.—The Baptist Church, John E. Barnard, pastor, Carterville, Ga., wants prices on art glass, roofing and heating equipment.

Building Materials.—See "Piping."

Building Materials.—See "Structural Steel."

Building Materials.—James W. Carter, Belton, Texas, wants prices on roofing, iron front and plate glass.

Building Materials.—A. E. Huddleston, White Sulphur Springs, W. Va., wants to

correspond with manufacturers of rolling partitions.

Coloring Powder.—Rhode Island Company, Spray, N. C., wants a quantity of cheap powder for coloring whitewash brown.

Concrete Mixer.—Henry Monk, Pensacola, Fla., wants new or second-hand small portable hand-power concrete mixer. State price f. o. b. Pensacola, exact condition, age, name of maker, and enclose photo or blueprints.

Contractors' Equipment.—Allen & Taylor, 305 Pennsylvania Building, Philadelphia, Pa., want from 20 to 50 steel skips 6x6 feet, also stiff-legged derricks in good condition.

Corn-mill Equipment.—Crouch Chain Co., Waco, Texas, wants prices on corn sheller, grinders, etc.

Cotton Gin.—Tabb & Davis, Mt. Pleasant, Texas, want prices on three-stand cotton gin.

Cotton-gin Equipment.—Farmers' Co-operative Gin & Milling Co., Granite, O. T., wants complete outfit for cotton gin, 4/70.

Cotton-gin Equipment.—Farmers' Gin Co., Paint Rock, Texas, has ordered four-stand gin, 60-horse-power engine and 75-horse-power boiler, but may contract elsewhere if manufacturer does not ship soon.

Cranes.—Harper Machinery Co., Park Row Building, New York, is in the market for two 12-ton and one 25-ton electric motor traveling cranes, 110 volts current, 50-foot span for bridge. State best price and probable time of delivery.

Dam Construction.—West Point Manufacturing Co., L. Lanier, president West Point, Ga., will open bids June 8 for the erection of a cement-rock dam on Chattahoochee river, near Langdale, Ala., to contain about 3000 cubic yards. Plans and specifications can be seen at office of president; usual rights reserved.

Derricks.—See "Contractors' Equipment."

Druggists' Supplies.—Koca Nola Co., 1417 Empire Building, Atlanta, Ga., wants prices on extracts and chemicals.

Dry-kilns.—See "Woodworking Machinery."

Electric-light Fixtures.—See "Furniture."

Electric-light Plant.—City of Morehead, N. C., Chas. S. Wallace, mayor, wants machinery and equipment for electric-light plant, including 1000-light 3½-kilowatt generator, direct current, 250 volts; one switchboard complete, crossarms, brackets, braces for same, including carriage bolts and washers, all necessary extra heavy glass insulators, locust pins, 49 poles, 2359 pounds weather-proof copper ins. wire, one injector and one feed pump, one 60-horse-power engine, one 60-horse-power tubular boiler, 51 cutter street hoods, 51 lamps, 32 candle-power, and all material necessary to erect a 500-light plant.

Electric Motors.—See "Cranes."

Electric-plant Equipment.—Richard B. Fentress and S. B. Medary of the Baltimore Refrigerating & Heating Co., 408 South Eutaw street, Baltimore, want competitive prices on modern equipment for electric-lighting and power plant. (From \$500,000 to \$1,000,000 will be expended.)

Electrical Machinery.—See "Water-power Electrical Machinery."

Electrical Plant.—J. C. Hales, Wilson, N. C., wants information and estimates on cost of water-wheels and electrical machinery for developing water-power and transmitting power by electricity.

Elevator.—Columbian Peanut Co., Norfolk, Va., wants prices on freight elevator.

Elevator.—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will open bids June 28 for the installation of an electric passenger elevator in the United States postoffice and courthouse at Montgomery, Ala., in accordance with drawings and specifications, copies of which may be obtained on application.

Engine.—Georgia Medicine & Bottling Co., Box 8, Atlanta, Ga., wants prices on engine.

Engine.—Henry Monk, Pensacola, Fla., wants new or second-hand 20-horse-power gasoline engine for driving small mill. State price f. o. b. Pensacola, exact condition, age, name of maker, and enclose photo or blueprints.

Engine and Boiler.—See "Electric-light Plant."

Engine and Boiler.—See "Cotton-gin Equipment."

Engine and Boiler.—Carolina Veneer Works, Clinton, N. C., wants prices immediately on 80-horse-power boiler and 50-horse-power engine.

Engine and Boilers.—The Marianna Manufacturing Co., Marianna, Fla., wants prices on 100-horse-power automatic engine, boilers and pumps, and one tank of not less than 25,000 gallons capacity.

Engines.—Interstate Electric Co., Ltd., Barronne and Union streets, New Orleans, La.,

wants addresses of manufacturers of alcohol engines.

Engines and Boilers.—See "Woodworking Plant."

Engines and Boilers.—See "Barrel-factory Equipment."

Fire Hose.—The Supply Co., 1106 Hibernia Bank Building, New Orleans, La., wants the agency for low-priced fire hose guaranteed to stand the underwriters' inspection.

Foundries.—See "Plow Works."

Furniture.—See "Seating."

Furniture.—Sealed proposals will be received at Treasury Department, Washington, D. C., until June 13 for manufacturing and placing in position in complete working order in the United States courthouse and postoffice building, Greensboro, N. C., certain quartered-oak furniture, golden-oak finish, and combination gas and electric-light fixtures. Drawings, specifications and blank forms of proposal can be obtained upon application. Partial bids will not be considered. Certified check to Secretary of Treasury for 10 per cent. of aggregate bid must accompany each proposal. Usual rights reserved.

Gas Fixtures.—See "Furniture."

Ginning Equipment.—Hartsfield Ginning & Manufacturing Co., Hartsfield, Ga., wants prices on complete cotton-ginning equipment.

Heating.—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will open bids June 21 for the low-pressure steam-heating apparatus, complete in place, for the United States custom-house and postoffice and extension at Nashville, Tenn., in accordance with drawings and specifications, copies of which may be had at office of supervising architect, or at the office of the superintendent at Nashville, Tenn., at the discretion of the supervising architect.

Heating and Ventilating Plant.—C. D. Runyon, secretary-treasurer board of education, Clarksville, Tenn., will open bids June 15 for installing heating and ventilating plant and heat regulation in a 16-room school building. Certified check for 5 per cent. of amount of bid must accompany each bid. Plans and specifications may be seen at office of H. C. Koch & Son, architects, Milwaukee, Wis., and C. D. Runyon, Clarksville, Tenn.; usual rights reserved.

Heating Equipment.—See "Building Material."

Heating Equipment.—See "Building Material."

Heating Plant.—E. F. Aydtlett, Elizabeth City, N. C., will open bids June 15 for heating building with hot water or steam; also for plumbing.

Hominy-mill Equipment.—Georgetown (S. C.) Rice Milling Co., Marks Moses, lessee, 122 Front street, New York, N. Y., wants machinery and equipment for pearl-hominy mill.

Hub-factory Equipment.—E. L. Thomson Land & Lumber Co., First National Bank Building, Rooms 303-305, Hattiesburg, Miss., wants prices and terms (f. o. b. Hattiesburg) on complete equipment for hub factory.

Launch.—T. W. Thrash, Tarboro, N. C., wants prices and terms on one five-horse-power launch or tugboat for towing barges on river.

Levee Work.—Mississippi Levee Commissioners, J. T. Atterbury, president, Greenville, Miss., will open bids June 21 for the construction of about 1,044,000 cubic yards of new levee. Plans and specifications may be seen and other information obtained at office of C. H. West, chief engineer. Usual rights reserved.

Machine-shop Equipment.—Alford Dental Motor Manufacturing Co., Sumter, S. C., wants machinery for manufacturing dental instruments, including water motors, etc.

Machine Tools.—Kent & Morrison, Security Bank Building, 1107 E. Main street, Richmond, Va., want one 30 or 36-inch second-hand boring mill.

Merry-go-round.—Ben Aymett, Pulaski, Tenn., is in the market for a merry-go-round.

Paving.—Board of Public Works, James R. Johnson, vice-president, Charleston, S. C., will open bids June 27 for 30,000 square yards of brick paving and for about 1200 square yards of granite-block paving. Bids will be considered for all material and labor, excepting brick and blocks, paving brick, granite blocks. Specifications can be had at office of city surveyor; usual rights reserved.

Piping.—Raine-Andrews Lumber Co., Gladwin, W. Va., wants a lot of galvanized pipe for water lines; also sewer pipe.

Piping.—Frank B. Gilbreth, builder, 211

North Liberty street, Baltimore, Md., is in the market for four-inch extra-heavy wrought-iron pipe with screw flanges on both ends in the following lengths: 5 feet 6 inches, 5 feet 9 inches, 6 feet 3 inches, 6 feet 11 inches, 7 feet 2 inches, 7 feet 4 inches and 7 feet 6 inches.

Piping.—See "Water-works Equipment."

Plow Works.—J. R. Davidson, Monticello, Ga., wants to correspond with foundries relative to the manufacture of a patented plowshare.

Pumps.—See "Water-works Equipment."

Pumps.—See "Barrel-factory Equipment."

Pumps.—See "Engine and Boilers."

Plumbing.—See "Heating Plant."

Plumbing.—See "Building Material."

Railway Equipment.—M. S. Greene, Box 431, New York, wants from 160 to 175 tons steel T rails, 20 to 25 pounds per yard, suitable for relaying.

Railway Equipment.—Maryland Equipment & Supply Co., 319 St. Paul street, Baltimore, Md., wants 50 to 100 good second-hand mine cars, capacity about 4500 pounds coal, gauge of track 36 inches, with end gate and brake, 14 or 16-inch self-oiling wheels.

Railway Equipment.—Harper Machinery Co., Park Row Building, New York, wants prices on 60-pound new trolley rails, either first or seconds, for Southern shipment.

Roofing.—See "Building Materials."

Scales.—Crouch Chain Co., Waco, Texas, wants prices on track scales and floor scales.

Saw-mill.—See "Woodworking Plant."

Saw-mill.—Planters' Lumber Co., Greenville, Miss., wants prices on saw-mill complete with a capacity of 30,000 feet, oak, ash, gum, cypress.

Seating.—Presbyterian Church, Winter Haven, Fla., wants bids on pews or chairs for church.

Sewerage.—City council of Dyersburg, Tenn., will open bids June 16 for furnishing materials and constructing about eight and one-half miles of pipe sewers and the necessary appurtenances for same. Certified check for \$500 must accompany bid for furnishing pipe and same amount with bid on construction. Plans on file with W. A. Fowkes, Jr., mayor, and Granbery Jackson, engineer. For printed copy of specifications apply to The Mayor.

Sewerage System.—President City Council, Tallahassee, Fla., will open bids June 22 for construction of sewerage system in Tallahassee and for furnishing the material for same. Work will embrace approximately 15½ miles of pipe sewers from 6 to 15 inches diameter. Certified check for \$1000 must accompany each bid. Plans and specifications on file and may be seen at office of Wm. W. Lyon, engineer, and copies of specifications, forms, etc., may be obtained from A. H. Williams, city clerk. Usual rights reserved.

Sewers.—City of West Point, Miss., B. V. Rhodes, mayor, will open bids June 7 for constructing eight and one-half miles of eight-inch-pipe sewers.

Shafting.—Columbian Peanut Co., Norfolk, Va., wants prices on shafting.

Spoke and Handle Machinery.—See "Woodworking Plant."

Spoke and Handle Machinery.—E. L. Thomson Land & Lumber Co., Rooms 303-305 First National Bank Building, Hattiesburg, Miss., wants prices (f. o. b. Hattiesburg) on spoke and handle machinery.

Tank.—See "Water-works Equipment."

Street Paving.—T. A. Blaise, city clerk, Oklahoma City, O. T., will open bids June 6 for paving a number of streets and avenues, including grading, curbing and draining same, according to plans and specifications on file at office of city clerk. Certified check on one of the local banks for 3 per cent. of amount of bid must accompany each bid. Usual rights reserved.

Structural Steel.—Frank B. Gilbreth, builder, New York and Boston, wants prices on structural steel for Postoffice Square Building, Boston, Mass. Plans for the building can be seen at either the New York or Boston office.

Tank.—See "Engine and Boilers."

Tanks.—See "Barrel-factory Equipment."

Vault.—O. L. Clement, commissioner, Danville, Ark., has plans and specifications at his office and will open bids on June 4 for the erection of fireproof vault and for re-covering courthouse.

Wagon-stock Machinery.—Carlin Furniture & Manufacturing Co., Chattanooga, Tenn., wants complete outfit for making buggy and wagon shafts and rims.

Water Motors.—See "Machine-shop Equipment."

Water-power-Electrical Machinery.—A. A. Christian, 4174 Leidy avenue, West Philadel-

phia, Pa., wants to correspond with engineers and manufacturers relative to the development of 60 horse-power on stream in Maryland.

Water-power Machinery.—See "Electrical Plant."

Water-works Equipment.—City of Macon, Miss., will want complete equipment for water-works, including 500 tons of pipe, one 100,000-gallon elevated tank, two pumps, 250,000-gallon filter, one centrifugal or air outfit for handling raw water to filters, pumping station, boilers, etc.; W. F. & A. D. Wilcox, C. E., Jackson, Miss., engineers in charge.

Woodworking Machinery.—See "Spoke and Handle Machinery" and "Factory Equipment."

Woodworking Machinery.—Joseph Bernasconi, Buenos Ayres, Argentina, wants catalogues of woodworking machinery, especially those treating of the more modern production of charcoal; is also interested in latest systems of drying wood for furniture.

Woodworking Machinery.—See "Wagon-stock Machinery."

Woodworking Plant.—T. W. Thrash, Taboro, N. C., wants prices and terms on 100 or 125-horse-power boiler, 35-horse-power engine, 15-horse-power engine, planing machinery, shingle machine, No. 2 Lane's saw-mill complete, machinery for veneer work on gum timber, spoke and handle machinery, etc.

MEXICO.

Bagging Factory.—Mauricio Brochat, Calle de Tacuba No. 26, City of Mexico, will establish a plant for the manufacture of sack and bagging material.

Cement Plant, etc.—The company organized by Charles Kratz, formerly of St. Louis, Mo., for the development of clay, marble and cement properties is preparing to install machinery and begin work. Contracts for the equipment will be awarded by A. R. Urrea of Guadalajara, Jalisco.

Cement Works.—The Dublin Portland Cement Works of Dublin, Hidalgo, has begun construction work to widen its canal in order to obtain additional power for manufacturing purposes. The cement plant is being remodeled and fitted with new machinery, etc. It is owned by the Banco Central of the City of Mexico.

Copper Mines.—The Progress Mining Co. has been organized to develop mining properties containing copper, lead and silver, copper predominating. Its capital stock is \$30,000 (gold). The organizers are Daniel McLeod, J. W. Nibel, Joaquin Ruiz and J. W. Matthews, all of San Luis Potosi, S. L. P. Address company, care of McLeod.

Dry-dock.—Tabasco & Chiapas Trading & Transportation Co. of Frontera, Mexico, has let contract to H. I. Crandall & Son of East Boston, Mass., for construction of an 800-ton railway dry-dock for the company's shipyard. This dry-dock will be constructed of steel, with heavy deck beams, to accommodate vessels up to 170 feet long, and will be shipped to Frontera in sections. It will cost about \$50,000 (silver).

Electric-light and Power Plant.—Monterey Electric Light & Power Co. of Monterey, New Leon, has received an extension of 15 years on its concession, and in consideration thereof agrees to expend about \$150,000 (gold) for the installation of new machinery and to replace its entire arc-light system by another which is more modern.

Electric-light and Water Plants.—The City of Jimenez has awarded contract to Welsch & Kock of Parral, Mexico, for construction of electric-light plant and water-works. They also have contract to build theater to cost \$40,000 and to construct a telephone system.

Electric Plant.—Carrizal Gold Mines Co. of the State of Michoacan has awarded contract to Rudolph J. Decker of Salt Lake City, Utah, for the installation of an electric plant at the company's mines.

Furniture Factory.—Mexican capitalists will organize company to establish plant for manufacturing furniture and vehicles. Don Rafael Izabel, Hermosillo, Sonora, can give information.

Gas Wells.—Dispatches state that J. B. Body, a director of S. Pearson & Son, City of Mexico, is drilling for gas at Jalpan.

Gold and Silver Mines.—It is reported that New York and Pennsylvania capitalists, headed by C. V. Culver, an attorney of New York city, have purchased the La Luz gold and silver mines near Silao, Mexico, and that the new owners will install additional machinery, including a 100-ton mill.

Gold Mines.—The Greene Consolidated Gold Co., chartered in West Virginia, has organized with W. C. Greene, president of the Greene Consolidated Cotton Co. of New

York, as president and general manager. This company has purchased and will develop about 6320 acres of placer gold-mining properties in the State of Sonora.

Gold Mining.—A. F. Solano, Benjamin Koering and associates of Magdalena, Sonora, have acquired placer gold-mining deposits, and will institute developments.

Hotel.—Manuel Buch, No. 9 San Francisco street, City of Mexico, will erect a modern hotel of 200 rooms to cost about \$450,000 (gold); structure to be five stories high, electric-lighting plant and fixtures, two electric elevators, laundry, sanitary plumbing, baths and other modern conveniences. Preliminary sketches for plans and specifications have been accepted. They were prepared by C. W. Warneke, architect, City of Mexico.

Iron and Gold Mines.—Juan Arteaga of Saltillo, Coahuila, has acquired 32 pertenencias of land containing iron and gold.

Lumber Developments.—Policarpo Valenzuela & Co. of the City of Mexico have obtained a concession to cut and export mahogany and cedar and to extract gums or rosin on government lands in the State of Chiapas.

Lumber Plant.—The Laguna Company of Chicago, Ill., will build a large lumber plant to cut the timber on a 600,000-acre tract of land in the State of Campeche. It expects to cut about 4,000,000 feet of mahogany, rosewood and cedar this year.

Manganese Deposits.—It is reported that the Imperial Land Co., A. H. Huber of Los Angeles, Cal., president, will develop manganese deposits in Lower California.

Mining.—Jesus Navarro, Minillas, Chihuahua, has begun to run a drift from a 110-foot shaft at its mines in order to increase the daily output.

Mining.—Thomas S. Moorehead of Monterey, New Leon, has acquired a 30-year lease on certain mining properties and will probably develop same.

Mining Properties.—It is announced at Chihuahua, Chl., that the Compania Minera Sensitiva de Nalca, S. A., has been organized, with a capital stock of \$40,000 (gold), to develop mining properties. Ramon F. Lujan is president; Manuel L. Lujan, secretary, and Jesus Garcia Acosta, treasurer.

Mining Properties.—William O'Neill and Leslie Coombs of Sahuaripa, Sonora, have purchased for \$20,000 a group of mines and agreed to begin developments at once.

Mining Properties.—I. Z. Mason of Cleveland, Ohio, has purchased mining properties in the State of Oaxaca through L. G. Parks of El Paso, Texas, and intends to organize a stock company to develop. Price reported as \$1,000,000 (silver).

Mining Properties.—La Favorita Mining Co. has been organized, with offices at El Paso, Texas, and capital stock of \$1,000,000 (gold), to develop mining properties near Parral, Mexico.

Mining Properties.—Milton H. Speer of El Paso, Texas, has purchased mining properties near Moctezuma, Sonora, and will develop same. The price paid was \$20,000 (gold).

Oil Properties.—It is stated that J. G. Follansbee and William Kraft of Chihuahua, Chl., and associates will develop oil properties and possibly also nitrate of soda deposits.

Paper and Printers' Supplies.—La Casa Cooperativa has been incorporated as the American Paper Co., with capital stock of \$25,000 (gold), to deal in paper and printers' supplies, W. R. Grogan being president, and N. L. Brinton, manager. It is reported the company will represent the Carpenter Paper Co. of St. Louis, Mo.

Quicksilver Mines.—Count P. H. de Rilly of France is developing quicksilver deposits near Ocampo, Guanajuato. He was registered at the Palace Hotel, City of Mexico, recently.

Rubber Developments.—It is rumored that the United States Rubber Co., main offices in Boston, Mass., will organize a subsidiary company, with capital of \$2,000,000 (gold), to engage in crude-rubber operations in Mexico.

Silver Mines.—San Pedro Nixtepec Mines contemplates sinking a shaft at a point on its properties where the outcroppings show that two veins of silver cross each other; offices at Colacao Nuevo, No. 4, City of Mexico.

Silver Mines.—Rumors state that the United States & Mexican Development Co. and the Rock Island No. 1 Mining Co. of Douglas, Ariz., are negotiating to purchase and develop the Juriquipa silver mines near Nacozari, Sonora.

Telephone System.—See "Electric-light and Water Plants."

Telephone System.—The federal govern-

ment and the city council of the City of Mexico have extended until May, 1905, the concession granted Jose Sitzenstaller for the establishment of a telephone system.

Theater.—See "Electric-light and Water Plants."

Vehicle Works.—See "Furniture Factory."

Wire-rope Works.—Enrique de Pena de Penaloza of the City of Mexico has been granted the concession for which he applied recently for manufacturing wire rope. It is rumored that he represents the A. Leschen & Sons Company of St. Louis, Mo.

Zinc and Other Mines.—The Mascota Mining Co., Mascota, Jalisco, is preparing to build a smelter of 100 tons capacity daily to treat zinc, silver, gold and copper ores of a rebellious character.

Railways.

Electric Railway.—An electric line for passenger and freight service is now in course of construction from Puebla Nueva to Naviad del Puerto, on the Pacific coast, Jalisco. Rolling-stock equipment will be needed. Address Coronel Don Miguel, Ahumada, Guadalajara, Jalisco.

Electric Railway.—The installation of an electric traction plant in Hidalgo del Parral,

Chihuahua, has been decided upon. Address Governor Luis Terrazas, Chihuahua.

Steam Railroad.—The Buena Vista Development Co. of the State of Vera Cruz will build a narrow-gauge railroad connecting its plantation in that State with the Vera Cruz & Pacific Railroad's main line.

Steam Railroad.—The Chihuahua & Pacific Railroad is reported to be surveying for an extension to some port on the Pacific coast. This, it is stated, has no connection with the plans of the Kansas City, Mexico & Orient Railway, which has an operating agreement with the C. & P. C. L. Graves is general manager at Chihuahua, Mexico.

Steam Railroad.—The La Mariposa Mining Co., in the State of Chihuahua, is reported to be seeking a concession to build a narrow-gauge railroad 14 kilometers long from Gallego, on the Mexican Central, to the mines. Alfredo de Gonzalez is manager of the company.

Steam Railroad.—The Mexican International Railroad is reported to have decided to continue the extension of the line from Tepic to Guanaevil in the State of Durango. R. Johnson is assistant chief engineer at the city of Durango, Mexico.

INDUSTRIAL NEWS OF INTEREST

Water-Power and Land.

A tract of 115 acres of land having good water-power within its limits is offered for sale by George A. Smith of Tryon, N. C.

American Blower Co. in Atlanta.

The American Blower Co., manufacturer of fans, engines, heaters, blowers, dry-kilns, etc., has established an office at Atlanta, Ga. B. C. Fennell is in charge.

Chas. R. Hewitt Engaged.

Chas. R. Hewitt, well known in the pneumatic-tool field, has just accepted a position as salesman with the Rand Drill Co. of New York. He will be connected directly with the selling of the "Imperial" tools.

A Saw and Planing Mill.

The Roseland Mills of Roseland, N. C., offers for sale a complete saw and planing mill, together with 1,000,000 feet of yellow-pine timber. Modern machinery is in position, and the plant is prepared to produce builders' finish and furniture specialties.

Westinghouse Publicity.

J. C. McQuiston, until recently secretary, has been appointed superintendent of the Westinghouse Companies' publishing department, having charge of matters relating to the publicity of the products of the various Westinghouse interests in the United States and Canada.

Locomotive Contracts.

The Savannah (Ga.) Locomotive Works & Supply Co. has completed general overhauling of one locomotive for the Southern Railway and one for the Chattahoochee Lumber Co. and received an order from the Terminal Company, Jacksonville, Fla., for general overhauling of one of its switch engines.

Joseph H. Thompson, Jr.

Announcement is made that Joseph H. Thompson, Jr., has established an office at No. 11 Broadway, New York, for buying, selling and exchanging all kinds of new and second-hand electrical and steam machinery. Those desiring to dispose of or purchase apparatus of this description are invited to correspond.

An Opportunity in Manufacturing.

The White Hardware Co. of Norfolk, Va., offers for sale a manufacturing plant. The company has large business interests which prompt it to dispose of this additional establishment. It has been suggested that the equipment of the plant is especially adapted for manufacturing sashes and blinds for the Baltimore market. For particulars write the company.

American Well Works at St. Louis.

The American Well Works of Aurora, Ill., has located its St. Louis Exposition exhibit in the Machinery Building block 35, bounded by aisles 7, E and D, and in Mines and Metallurgy Building, block 13. This company will show a comprehensive line of its well-known well-sinking, mining, prospecting and pumping machinery, gasoline engines, air compressors, etc.

Improved Portable Wheel Press.

The Walter A. Zelnicker Supply Co. in St. Louis has made recent improvements on its Hand-Power Portable Wheel Press, and now has a press that will do all claimed for it.

This press is adapted for small roads and on large roads at points where there is not sufficient work to warrant the expenditure of installing a large press. Full particulars sent on request.

New Brick Kilns and Dryers.

Brick manufacturers are presumably interested in improved kilns and dryers for their purposes. They will therefore be pleased to have their attention called to the Double Chamber Up and Down Draft Brick Kilns and Direct Heat and Hot-Air Brick Dryers built by F. W. Dennis of Atlanta, Ga. A booklet giving full particulars can be obtained on request.

When at St. Louis.

The Laclede Fire-Brick Manufacturing Co. of St. Louis extends to its numerous friends and patrons a cordial and hearty invitation to visit St. Louis and the World's Fair. When weary with the endless attractions of the great exposition, they are invited to seek diversion by visiting the company's offices and factories, where a well-appointed staff will be at their service.

The Electric Supply Co.

Business with the Electric Supply Co. of Savannah, Ga., is reported as extremely good and active. This company of contracting engineers and wholesale electrical supply dealers was incorporated in March, with a paid-in capital of \$25,000, and has its main offices at 38-40 Drayton street. It has added to its business an automobile department, and is handling the Ford Double-Ended Cylinder Gasoline Automobiles and the Waverly Electric Automobile.

In Its New Warehouses.

Because of increasing business, the Stratton & Bragg Co. of Petersburg, Va., recently found it necessary to obtain more commodious facilities, and is now established in its new warehouse four stories high, 55x110 feet. This company was organized in 1892 and incorporated in 1903. It has developed a large trade in the South, especially in Virginia and North Carolina, and deals in machinery, machinists and plumbers' supplies, and makes a specialty of general mill supplies.

Lumber Plant for Sale.

An auction sale of a complete modern lumber plant will be held at Kinston, N. C., on June 20. This plant is the property of the Gay Lumber Co., now under receivership. It includes saw-mill of 40,000 feet daily capacity, planing mill of 30,000 feet daily capacity, dry-kilns with daily capacity of 35,000 feet, lumber and freight railroad with 30 miles of rail, timber rights, etc. For full description address J. W. Grainger, receiver, or Messrs. A. D. Ward and Land & Cowper, attorneys, Kinston, N. C.

Turbine Plant.

Westinghouse-Parsons steam turbines will be installed in the new power station of the Union Metallic Cartridge Co. at Bridgeport, Conn. The initial installation will consist of two turbo-generating units, each of 500 kilowatts capacity. The two units will operate in parallel and furnish 440-volt three-phase current at 7200 alternations per minute for general power and lighting purposes in the various shops within three or four blocks. The turbines will operate under 150 pounds steam, 28-inch vacuum, and possibly superheat. The installation is in charge of

Samuel M. Green, consulting engineer, Holyoke, Mass.

The Palmer & Rich Company.

Buyers of machinery, tools and mill supplies will be interested to know that the Palmer & Rich Company is now permanently located in its new home at 306 N. Holliday street, Baltimore. This company acts as manufacturers' agent and jobber for engines, boilers, steam pumps, shafting, pulleys, hangers, belting (being Baltimore branch of the Page Belting Co.) and other mechanical equipment and supplies. Buyers will find it advantageous to obtain estimates from the Palmer & Rich Company.

Electric Plant for the Government.

The government, after thorough inspection and test, has accepted the electric-light plant installed at the Cherokee Indian School in Western North Carolina by the Piedmont Electric Co. of Asheville, N. C. The plant is of 700-light capacity, operated by water-power obtained by the building of a five-foot dam on the Oconalufy river; water is carried to the wheel by a sluice 2500 feet long. There are 16 buildings on the school reservation, all equipped with incandescent lights; the grounds are also lighted. The engineering work was in charge of Wm. Farr, general manager for the Piedmont Electric Co.

National Filter Co.

The National Filter Co. of Chicago, with Southern offices in both Baltimore and New Orleans, is furnishing over 90 per cent. of the water filters being used on the World's Fair grounds, St. Louis. This well-known firm manufactures two distinct types of filters—in one is used natural stone for the filtering medium, and in the other type a specially-prepared ground flint, or, under special conditions, bone charcoal. Owing to the various sizes of these filters the company meets all requirements from small filters for domestic purposes to complete municipal plants. All the National filters are sold under an absolute guarantee.

Westinghouse-Parsons Turbines.

The Parkersburg (W. Va.), Marietta & Interurban Railway Co. is extending its present power station with Westinghouse-Parsons steam turbines. A 400-kilowatt unit will be installed for the present, which will operate on 150 pounds steam and 28-inch vacuum. Steam will be furnished by water-tube boilers without superheater. The generator will furnish two-phase 60-cycle current at 2200 volts to a single-phase distribution system supplying current for local lighting. The turbine unit will operate in parallel with the present equipment of the plant, which consists of Westinghouse compound engine generating outfits of the belted type.

Yellow-Pine Railroad Lumber.

Continued activity in the construction of railroads and the extension of established lines calls for a great quantity of railroad lumber. The manufacturers who are meeting this demand find the consumption steady. Some mills have made a specialty of railroad lumber and earned a permanent position as sources of supply for the country. Among them is the Gress Manufacturing Co. of Tifton, Ga., manufacturer of yellow-pine railroad lumber, car stock and factory timber, rough and dressed. This company has a large plant, its annual capacity being some 60,000,000 feet of lumber, and is able to furnish almost anything made of yellow pine. Buyers are invited to obtain estimates from the Gress Manufacturing Co.

Revolving Sliding Sashes.

The idea of a sliding sash that can be revolved at will, as worked out in the Lupton window, is claimed to meet the objections heretofore urged against revolving sliding sashes. There is no impairment of the weather-tightness nor lessening of the fire resistance of the window. By means of a lever, the sashes are moved back into jamb, allowing freedom for the sashes to be revolved in either direction. A second movement of the lever brings the sashes forward again, firmly locking them. No springs are used. If interested, write for book illustrating and describing the Lupton Window. Address David Lupton's Sons Co., Allegheny avenue and Tulip street, Philadelphia.

Allis-Chalmers Power Department.

James W. Lyons, who has been for many years associated with the Allis-Chalmers Company as engine salesman, has been appointed manager of the newly-created power department of the Allis-Chalmers Company, with headquarters in Chicago. This department will control the sales of reciprocating steam engines, steam turbines (entire unit, including turbo-generators), condensers, gas engines, pumping engines, blowing engines,

hoisting engines and air compressors. Mr. Lyons' promotion will gratify his many business friends throughout the country, for he is very well known, and it is an evidence that the management is determined to preserve the best traditions of the Allis-Chalmers Company.

Of Interest to Producers and Users of Coal.

It is understood that some of the large railroads and a department of the Louisiana Exposition are erecting quite an extensive plant at the St. Louis Exposition for the purpose of demonstrating the most economical methods for utilizing coals, especially the lignite coals of Montana, the Dakotas and other Western States. The results obtained will doubtless be very valuable data to all producers and users of coal. This plant will be under the direction of the United States Geological Survey, and this department of the government has awarded contract to the C. O. Bartlett & Snow Co. of Cleveland, Ohio, for a No. 3, style "C," Four-Compartment Direct-Heat Rotary Dryer, to be used in the plant.

Belt-Polishing Machine.

The Patterson Belt-Polishing Machine carries 10x1½ emery wheels, fitted with a flanged pulley, and beside it stands a very clever attachment which can be used with any make of grinding machine. This attachment is fastened to the floor by two lag screws, an endless polishing belt running over the two flanged pulleys, which are seven inches in diameter and capable of carrying belt three inches or less in width. A simple and durable arrangement is provided for tightening and loosening the belt. The stud on which the flanged pulley revolves is drilled with holes at right angles to each other, the end tapped out to receive a compression grease cup. This device insures perfect, clean and economical lubrication. The two pulleys and the attachment weigh 105 pounds. The horizontal adjustment is seven inches. This machine is manufactured by the Miami Valley Machine Tool Co. of Dayton, Ohio.

Important Contracts for Windows.

In determining the character of windows for modern buildings architects and owners are giving preference to those of fireproof construction. When this has been determined, the next point to be considered is what window shall be ordered. Many such contracts go to the David Lupton's Sons Company of Philadelphia, offices at Allegheny avenue and Tulip street. This company has lately received contract for the metal windows for the Wanamaker stores in Philadelphia, which, with the contracts for the New York stores which the Lupton Company has been filling, amounts to nearly \$250,000. There are 115,000 square feet of windows in the Philadelphia stores, and the Lupton Company states it will receive about \$20,000 more than the amount of the bid submitted by the lowest bidder. This is an indication of what is thought of the Lupton window by those who investigate its merits.

Recent Hicks Contracts.

Many orders for railway equipment continue to reach the Hicks Locomotive and Car Works. The buyers are private parties, industrial companies and railways in all parts of the United States. The most recent list of Hicks sales includes the Pittsburg, Carnegie & Western Railroad, ordering 10 flat cars; Weed Lumber Co., 10 flat cars; Cincinnati, Georgetown & Portsmouth Railroad, six center-dump cars; Lancaster & Chester Railway, 10-wheel locomotive; Little Rock & Hot Springs Western Railroad, 52-ton eight-wheel locomotive; W. E. Dorwin, contractor, eight-wheel engine, combination coach and 10 50,000-pound capacity flat cars and two 40,000-pound capacity box cars. Various other contracts for locomotives, combination cars, passenger coaches and other railway equipment are also listed. Buyers in the market for railway equipment will find it advantageous to secure prices from F. M. Hicks; office in the Fisher Building, 277 Dearborn street, Chicago.

Hydraulic-Press Exhibit at St. Louis.

The topic of the Louisiana Exposition at St. Louis is one of general interest. Many of the mechanical exhibits have exceptional attractions. One of these exhibits is an unusually practical one, consisting of seven hydraulic presses in operation, each driven by a gasoline engine, and all the product of the Hydraulic Press Manufacturing Co. of Mt. Gilead, Ohio. These presses will be making cider from fruit preserved in cold storage for the purpose, and the cider will be on sale. The company also has in operation at Section 15, Agricultural Building, two lard and grease curb presses and one small tankage press. Colored maps showing the location of the cider presses at the fair are being

distributed by the company, and copies may be obtained on request. The Hydraulic Press Manufacturing Co. manufactures hydraulic presses and pumps for all purposes, and has its main plant at Mt. Gilead, Ohio; St. Louis office at 934-936 N. Main street, and New York office at Room 124, 39-41 Cortlandt street.

Graphite Paint in Baltimore Fire.

This Union Trust Building, erected in 1897-1898, passed through the Baltimore fire. Much of the terra-cotta has fallen away, leaving the steel frame exposed. The condition of the latter, which is preserved intact, substantiates the claims made for this class of construction. The structure also offers the first notable opportunity of testing in actual practice the paint employed to protect steel in buildings. In this case there are practically no signs of rust, and the paint is as glossy and effective as when applied six years ago. The facts indicate that Superior Graphite Paint, which was used for both shop and field coats, can be depended upon. Its durability and high spreading power render it economical upon metal and woods, as its extensive use among manufacturers attests. If you contemplate any painting it will pay you to investigate further. Color card and booklet will be sent upon application. Address the manufacturer of the paint named, Detroit Graphite Manufacturing Co., Detroit, Mich.

Powhatan Clay Bricks Used.

Brick will doubtless always continue in favor as a building material, but care will be taken in the kind of brick selected by the architect or contractor. That is, bricks which have proven their superiority will be given the preference. In this regard it is pertinent to mention that Powhatan Clay Bricks were selected for the following buildings: Central Congregational Church, Atlanta; Grand Theater and Office Building, Macon; union passenger depot at Durham; Norfolk & Western depot at Marion, Va.; courthouses at Valdosta and Louisville, Ga.; University Gymnasium, Chapel Hill, N. C.; Munn Building, Lakeland, Fla.; Bijou Theater, American National Bank, Mutual Insurance Society, Virginia State Insurance and Roman Catholic bishop's residence at Richmond. The bricks referred to are the product of the Powhatan Clay Manufacturing Co., manufacturer of cream white, buff, silver gray, salt-and-pepper gray, iron spot and other face bricks, and fire-brick; offices at Richmond, Va.

O. Perry Sarle in Atlanta.

The opportunities presented in the South for the abilities of engineering experts has attracted men who have become known throughout the entire United States for their work. O. Perry Sarle, consulting engineer, of Providence, R. I., has frequently been connected with various projects in the South, and realizing the demand for such services as he can afford investors, he has established himself at 616 Austell Building, Atlanta, Ga. Mr. Sarle's experience covers nearly 20 years, during which time he has been engaged on 17 dams for power development, for transmission of power by electricity, for compressed-air production, for water supplies, etc. His practice has also covered questions of design, construction, estimating values of plants, estimating the efficiency of fire-protection systems, also sewage-disposal work, harbor improvements, marine railways, ferry slips, etc. Municipalities and private corporations contemplating engineering work of any importance are invited to address Mr. Sarle at Atlanta.

Patterns for New Engines.

Those who use engines will be interested to know that the Valley Iron Works of Williamsport, Pa., is now completing the patterns for its new line of enclosed or self-oiling automatic cut-off engines. There will be 58 sizes adapted to mill, factory and electrical work. The catalogue of these machines is not yet ready for issuance, but an illustrative and descriptive circular is now being distributed. The company has recently received a number of large orders for engines, including the following: 150 horse-power for Central Pennsylvania Lumber Co., Leetonia, Pa.; 100 horse-power for McAdoo (Pa.) Electric Light Co.; 75 horse-power for Home Brewing Co., Shenandoah, Pa.; 125 horse-power for J. R. Johnson & Co., Richmond, Va.; 125 horse-power for Johnson Forge Co., Wilmington, Del.; 75 horse-power for Germania Refining Co., Rouseville, Pa.; 75 horse-power for Penn Refining Co., Oil City, Pa.; 60 horse-power for Emporium (Pa.) Powder Manufacturing Co., and two of 100 horse-power for Tamaqua (Pa.) Manufacturing Co.

Something About Wireglass.

Owners of buildings will find something to interest them in the following extracts from a letter written by the Safe Deposit & Trust Co. of Baltimore. This company

writes: "Although we were in the very heart of the burned district, the interior of our building and contents were absolutely unharmed. One feature of our construction proved particularly efficient. This was the large wire-glass skylight 30x40 feet in size and covering the entire center of the large banking room. Below this is a skylight of stained glass, and although this wireglass bore the brunt of a tremendous heat from without as well as the shock due to a section of falling wall from adjoining five-story building, it remained in place, protecting absolutely the stained-glass skylight below. We deem this performance so remarkable that we have placed an order for wireglass in our present iron frames for all our outside windows." This letter was written to the Mississippi Wireglass Co. of 277 Broadway, New York. By writing this address people interested in protecting their buildings from fire will receive some valuable data regarding the subject.

Modern Metallic Furniture.

Until within recent years but little study was made of the problem of reducing interior fire hazards. Efforts to fireproof have been confined chiefly to the structural features of the building, but the reduction of these interior hazards is now being affected by the use of fireproof furniture. Office furniture and supplies made of metal afford protection to valuable papers, office records and other similar business data, and the design and manufacture of this kind of furniture is now a specialty with several well-known experts in metal work. In a recent issue of "Insurance Engineering" appeared an interesting article on metallic furniture referring at some length to this American product that minimizes interior fire hazards, its chief uses and its proper installation. This new metal furniture includes desks (both flat and roll-top), tables, filing devices, card-index cases and the various other equipment required in modern business offices. The article in the publication referred to was written by M. F. Kelley of the Art Metal Construction Co., Jamestown, N. Y., manufacturer of metal furniture. Its perusal will present some important facts to every reader.

The I. C. Hirsch Company.

An interesting announcement comes from Cincinnati reporting the organization of the I. C. Hirsch Iron, Steel & Rail Co., to manufacture and deal in iron and steel, rails and spikes, etc. The company's plant will cover a 12-acre site near Ivorydale, Ohio, and is to include a foundry, 110x320 feet; machine shop, 200x350 feet; locomotive and car repair shops, 400x500 feet; a large storage warehouse and yards for storing rails, iron and steel, etc. Plans and specifications for this plant have been completed. I. C. Hirsch (formerly vice-president, treasurer and general manager of the Cal. Hirsch Iron & Steel Co. of St. Louis) and W. B. Kahn (director of the German National Bank, St. Louis) are the principal owners of the new enterprise. Mr. Hirsch will be in active charge, and has secured accommodations in the First National Bank Building, Cincinnati, Ohio. He intends to carry in stock, manufacture and contract for everything in the iron and steel line. Numerous orders have already been filled. Branches will be maintained in Chicago, Pittsburg, New York, San Francisco, Denver, Kansas City and New Orleans. Messrs. Hirsch and Kahn are also interested in a waste factory, and will thus be enabled to meet competition in this direction.

Mead-Morrison Manufacturing Co.

The Mead-Morrison Manufacturing Co. has assumed the coal-handling business of the John A. Mead Manufacturing Co. of New York. Its directors are: Eugene N. Foss, treasurer; B. F. Sturtevant Co., Boston, Mass.; John G. Morrison, president; Rawson & Morrison Manufacturing Co., Cambridge, Mass.; W. S. Martin, manager New Hampshire and Vermont, Massachusetts Mutual Life Insurance Co., Manchester, N. H.; Arthur P. French, attorney, Boston, Mass.; Benjamin D. Brown, vice-president John A. Mead Manufacturing Co., New York, and Col. W. J. Hoyt, capitalist, Manchester, N. H. Eugene N. Foss is president; W. J. Seileck, vice-president and Western sales agent; John G. Morrison, treasurer; W. S. Martin, Jr., general manager; Orton G. Dale, manager of New York office; A. E. Norris, consulting engineer, and F. W. Scott, superintendent. Offices will be maintained at 31 Main street, Cambridgeport, Mass.; Kimbark avenue and 74th street, Chicago, and 11 Broadway, New York. The company will manufacture at Cambridge, Chicago and Rutland, Vt. It will follow out those general lines which have made the John A. Mead Manufacturing Co. so successful, and will enlarge its plant and working scope sufficiently to keep abreast of the trade.

To Facilitate Building Operations.

The subject of grade and widening of Baltimore street in the burned district of Baltimore having been determined, the buildings along that locality are now beginning to loom up, and each day shows a definite amount of progress. The Piper Building, at Hanover and Baltimore streets, is, perhaps, as far advanced as any, and this is not surprising, for the reason that the contractor is using a steam derrick over 70 feet long, a double elevator and patent scaffolding for bricklayers, and has simply been waiting for various subjects to be determined by the city before making a strenuous rush to complete the building. The particular kind of patented scaffolding for the use of bricklayers is being used for the first time in Baltimore. It is a very simple, yet ingenious arrangement, whereby the mason and his bricks and mortar are raised up without interruption to the work as often as may be necessary to keep the bricklayer and his bricks and mortar at the most advantageous height, as compared with the wall, to enable him to lay brick the easiest and fastest. Talking with some of the Baltimore bricklayers on this work, one made the statement that this scaffold not only enabled the bricklayer to build a better wall, as he could fill the joints more thoroughly, but he was enabled to lay over twice as many brick in the same time because there was no stooping or bending either to pick up the brick and mortar or to lay the brick on the wall. The superintendent on the building stated that there are men on the work that could lay 500 brick in one-half hour from this scaffold, which is two or three times as fast as is customary from the ordinary scaffolds. It is hoped that Baltimore contractors will take advantage of this scaffold and all other modern devices that are being introduced into Baltimore.

TRADE LITERATURE.**General Electric Literature.**

Some timely literature is being issued by the General Electric Co. of Schenectady, N. Y. It includes an illustrated pamphlet telling all about fan motors, also Bulletin No. 4340, referring to Meridian Lamps and supplement to that bulletin referring to Meridian Lamps with Prismo Glass Shades.

The Exchange.

The May issue of The Exchange is an interesting little publication, and will appeal especially to people who want to keep posted as to the kind of roofing that gives the best service. This publication is issued monthly for the general information and assistance in selling goods of the agents and subagents for the Standard Paint Co., 100 William street, New York. This company manufactures Ruberoid, a roofing that is used successfully all over the world.

The Progress Reporter.

The May issue of the Progress Reporter contains some interesting information regarding the superior machines manufactured by the Niles-Bement-Pond Co. of New York city. The publication is issued in the interest of the public as well as the employees of the company. One of its illustrations shows a chip weighing 16½ ounces, taken on a powerful Niles lathe at the Midvale Steel Works in Philadelphia. The grade of steel used in the forging is one of the toughest and hardest known to engineering practice.

Exceptional Offers in Machinery.

Operators who happen to be in the market for machinery of any kind should write for a copy of the leaflet referring to the exceptional offers made by the Maryland Equipment & Supply Co. of 310 St. Paul street, Baltimore. This list includes hoisting engines, cableways, derricks, steam shovels, locomotives, steam rollers, crushers, concrete mixers, boilers, air compressors, iron and steel, etc. Many of the articles enumerated will be needed in the rebuilding of Baltimore, and contractors engaged in the burnt district should investigate the Maryland stock.

The Best Roof.

A card issued by the American Sheet & Tinplate Co. states that the best roof that can be put on a house is one made of terne plate, commonly called roofing tin. It continues that the best terne plate is M F Roofing Tin, first made about 60 years ago by R. B. Byass & Co. at Margam Forge, South Wales, latterly brought to America and improved by American tinplate manufacturers, and now being produced by the American Sheet & Tinplate Co. at its works in Martins Ferry, Ohio. For information regarding M F roofing tin and "Apollo Best Bloom" galvanized sheets of iron and steel write the company's offices at Pittsburgh, Pa., in the Frick Building.

Report on Coal Lands Near Cumberland, Md.

A report on the Alpha coal mine has been issued by Leo von Rosenberg, mining engineer, 170 Broadway, New York. Mr. Rosenberg made a thorough examination of this mine, situated in the Cumberland-George's Creek Coal Basin, near Cumberland, Md. He was afforded the opportunity of making burning tests in the boilers of a nearby powerhouse and on the locomotives of the West Virginia Central & Pittsburgh Railway. This actual test of the coal under different conditions proved it to be a good steaming coal, as well as a good general fuel. The Rosenberg report presents in detail the various facts of interest regarding the Summit Coal Co.'s property, together with much useful information as to geological features of the region. Complete maps accompany the pamphlet.

Superior Catalogue Illustration.

The literature distributed nowadays by progressive American machinery manufacturers is frequently of a most superior character from an engravers' and printers' standpoint, aside from its purpose of describing new machinery. An instance in point is the catalogue just issued by the Lewis Foundry & Machine Co. of Pittsburgh, Pa. This catalogue presents photographic illustrations of iron and steel works machinery and other equipment of that character, which, in their results, show an exceptionally high grade of work on the part of the engraver. The pictures of the machines are probably as near perfection as skill can make them. They should be examined by every prospective publisher of a machinery catalogue. The illustrations are made from plates furnished by Messrs. Gatchel & Manning, illustrators, designers, photo and wood engravers, offices at 33 South 6th street, Philadelphia.

Dragon Portland Cement.

During the past 15 years "Dragon" Portland cement has been used on some of the heaviest and most important masonry in the United States and abroad. The manufacture of this cement has developed into a science, and the utmost care is taken in every department from the time the stone is quarried until the cement is packed for shipment. The Lawrence Cement Co. of Pennsylvania manufactures the "Dragon" brand at Slegfried, Pa. It controls about 500 acres of land containing an inexhaustible supply of cement rock in the Lehigh valley, and an enormous deposit of superior quality of limestone adapted to the manufacture of the highest grade of Portland cement. A pamphlet giving valuable cement data has been issued by the company, and all engineers and contractors who are not using "Dragon" cement should become acquainted with the publication's contents. Address the offices at No. 1 Broadway, New York, or in the Harrison Building, Philadelphia.

Cotton-Ginning Machinery.

The buying public interested in cotton-ginning machinery will find valuable facts, accompanied by illustrations, in the catalogue of the Continental Gin Co., offices at Birmingham, Ala. It has been the policy of this company since it acquired the best-known gin-machinery works in 1900 to constantly improve its machines and meet all the conditions required to prepare cotton for market in the most efficient and expeditious way. The various machines of the company have become noted for their genuine worth, and are now extensively used throughout the cotton-growing States. One of the Continental specialties is the Minger Ginner's Compress, designed for compressing cotton at the ginhouses. This equipment has met with especial favor among cotton-growers and handlers. Beside manufacturing cotton-ginning machinery and complete equipment of all kinds, the Continental Gin Co. deals in engines and boilers, belting, shafting, pulleys, pumps and heaters, wagon scales, etc. Send for catalogue.

Small Motors.

With the steadily-increasing application of electricity in all manufacturing industries a large demand has arisen for motors of small and medium sizes. This demand is widespread and relatively as great in small cities and towns as in the metropolitan centers. The merits of the electric motor as a means of supplying power for a multitude of purposes in mechanical and commercial lines, as well as for domestic use, are too well known to require extended notice. Suffice it to say that no other power supply is so reliable or flexible in application or so inexpensive in maintenance and use as that furnished by a good electric motor. The General Electric Co. has given particular attention to the design and manufacture of a large and comprehensive variety of these small motors, and has issued an illustrated pamphlet, the

object of which is to acquaint prospective users of motors with the different types of these machines, as well as to draw attention to their wide possibilities of application and to show typical examples of how they may be used to meet special requirements. Address the offices at Schenectady, N. Y., for the "Small Motors" publication.

Slate Products.

It seems needless to dwell on the desirabilities of slate products for the various purposes for which they are used. Builders and contractors have become well acquainted with the features of slate that have made this material in such general demand for building purposes all over the country. But the selection of the brand of slate to be purchased is something that buyers must consider. No doubt a great quantity of high-grade structural slate will be used in building operations in Baltimore for the next several years, and reference to a certain well-known output is therefore timely. The output referred to is that of Messrs. J. F. Moyer & Co., lessees of the Old Bangor Slate Quarry, miners and manufacturers of the celebrated brand of the Genuine "Old Bangor" Roofing Slate and slate goods of every description. Such articles as slate, treads, urinal stalls, vault work, platforms, hearths, mausoleums, copings, laundry tubs, kitchen sinks, bowling alleys, etc., may be mentioned. Messrs. J. S. Moyer & Co. have issued an illustrated catalogue of their slate products, a copy of which should be in the hands of every progressive architect and contractor. Address their general offices at Bethlehem, Pa.

Fairbanks-Morse Machinery.

Messrs. Fairbanks, Morse & Co. call the attention of users of pumping machinery to the designs shown in their new catalogue. They are continually adding to an already extensive line of patterns, and are prepared to offer a pump suitable for almost any service to which direct-acting pumps can be applied, yet it is not possible, without overloading a catalogue, to mention all the different sizes and types they are prepared to furnish. The catalogue, therefore, illustrates only those lines for which there is the most frequent demand. During the past 12 years in which the firm has manufactured steam pumps they have incorporated in the machines the experience and most careful study of the best engineers and designers. The material and workmanship entering into the construction of these pumps is kept up to the highest standard at all times. All the wearing parts are made to gauge, and are, therefore, interchangeable. Every pump is thoroughly tested before leaving the factory. Since their last catalogue the firm has greatly increased their facilities for manufacturing steam pumps, having during the past year completed and equipped an entirely new factory. Fairbanks, Morse & Co. have their main establishment at Chicago and branch houses in most of the prominent cities of the United States, all carrying in stock a line of pumps and repair parts.

An Interesting Westinghouse Publication.

The name Westinghouse has for many years been closely identified with the production of apparatus for the generation, distribution, application and control of power—factors which have contributed so much to the advancement and progress of mankind. A most interesting Westinghouse publication is that now being issued to tell in a few words and by a few pictures something about the plant of the Westinghouse Electric & Manufacturing Co. of East Pittsburgh, Pa. This is the largest of the many plants associated with the name of Westinghouse, and believed to be the largest and the most modern workshop in the world. The East Pittsburgh plant comprises buildings having a total floor space of over 2,000,000 square feet, or about 47 acres, and about 9000 persons are employed in the manufacture of the various kinds of electrical machinery for which the name Westinghouse has become noted all over the world. The publication herein referred to treats of the Westinghouse works in both their industrial and sociological aspect. It is a handsomely-printed pamphlet, fully illustrated with camera pictures of various portions of the East Pittsburgh plant, the machinery used and the machinery manufactured, together with views of the Casino, that department of the plant wherein recreation is provided for the employees.

Uncle Sam, Printer, Uses Electric Power.

Not only with respect to external dimensions and floor space, but in regard also to number of employees and extent of output, the Government Printing Office at Washington is fully entitled to claim the distinction of being the largest printing office in the world. To the visiting electrical engineer it is more

than gratifying to note how, with remarkable boldness, but with corresponding judgment and discretion, electricity has been called upon to discharge all the vital functions of light and power, as well as to furnish heat in a novel and convenient manner in the government plant. The display of the flexibility and resourcefulness of electricity in all parts of the plant is indeed a fascinating study. It would have rejoiced the heart of him who was once this country's typical printer and pioneer master electrician—Benjamin Franklin himself. A complete description of this national plant was recently printed in the Electrical World and Engineer, and an abstract from the series of articles has been published in an illustrated pamphlet. This will interest everyone who wants to be informed as to the use of electricity and its adaptation to the various situations in Uncle Sam's big printing house. The Crocker-Wheeler Company of Amper, N. J., furnished the electrical machinery used in the plant. It can supply copies of the pamphlet mentioned.

Curtis Steam Turbine.

"The principle of the Curtis Turbine differs from that of any other type, in that it permits the use of moderate rotative speeds and very compact and simple mechanism. The turbine is divided into stages, each of which may contain one, two or more revolving buckets supplied with steam from a set of expansion nozzles. The work is divided between several stages, consequently the nozzle velocity in each stage is reduced, thereby rendering the nozzle action more efficient and perfect than it can be where a higher initial velocity is imparted. Under this arrangement the energy of the moving steam is effectively given up to the revolving part. The division of pressure between the stages is so arranged as to utilize the largest possible proportion of the energy of expansion. The position of the moving and stationary buckets with relation to the nozzle is shown in the diagram on the following page. In other types of turbines the steam finds its way either through a great number of successive rows of buckets without being carried through nozzles or is used in giving velocity in a single set of expansion nozzles requiring either a very large number of buckets and involving other serious difficulties and limitations, or necessitating the use of very high velocities of rotation, thereby rendering the turbine impracticable for the direct driving of electric generators or other similar purposes." The foregoing comprises the introductory remarks of a pamphlet which describes in detail, accompanied by illustrations, the Curtis Steam Turbine. This pamphlet is accompanied by a report of the test of Curtis Steam Turbine generating set at Newport, R. I. Copies of these publications can be obtained by addressing the General Electric Co., Schenectady, N. Y.

REBUILDING AUSTIN'S DAM.**A Big Proposition Made to the Texan Capital.**

Dr. John N. Jacobs of Landsdale, Pa., who is a stockholder in the Austin (Texas) Gas Co., has offered to furnish all the money and bear all the expenses, estimated at \$500,000, to rebuild the dam in the Colorado river at Austin on the following conditions:

On the day the dam is ready for operation the city is to give Dr. Jacobs a lease on the water and light plant for a period of 50 years.

Dr. Jacobs assumes the entire water and light indebtedness of \$1,400,000, principal and interest, the city being clear of this debt on the day the dam is put in operation.

At the end of 50 years the dam is to be given to the city free, with the exception of what may have been put into it in the way of betterment.

During the lease Dr. Jacobs is to derive all revenue from water, light and power, he agreeing to make reasonable rates.

At a meeting of citizens called to discuss the proposition Dr. Jacobs said that the proposition was in a crude state; that the matter might be worked out by Austin people themselves, but that if his offer was accepted he would carry out the agreement. Mr. Robert O. Deming of Oswego, Kan., who is also interested in the gas company, and who accompanied Dr. Jacobs to Austin, said that under the proposed contract they expected a maximum rate to be set for water, light and power based upon the average of the rates in Texas cities of 15,000 or 20,000 population.

FINANCIAL NEWS

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office Manufacturers' Record,
Baltimore, Md., June 1.

Dullness has characterized the Baltimore stock market during the past week, and this was intensified by the double holiday of Saturday and Monday. About the only signs of anything like activity were visible in the sales of Northern Central stock warrants and United Railways income bonds, on which latter the payment of the June coupon has been deferred, and in the trading in common stock of the same company. Everything else was quiet, only a few sales here and there being reported.

In the dealings United Railways common sold from 8½ down to 5¼; the incomes from 48¼ down to 43¼, recovering to 44½, the last sale being at 44½. The 4s went from 90 to 89½. Consolidated Gas changed hands at 69¼ and 70; the 6 per cents at 111½ to 112, and the 5s at 113; Seaboard common at 7¼, the preferred at 16½ and 16¾, and the 4s at 70; the 10-year 5s at 96¾, and the three-year 5s at 87 to 87½. G. B.-S. common sold at 4½; the incomes at 18½ and 19, and the 1sts at 47½ and 47¾; Cotton Duck 5s at 50 to 50½.

Bank stock sold as follows: Bank of Baltimore, 120 to 120¼; Citizens', 26 and 26½; German-American, 106; Mechanics', 28; Western, 35. U. S. Fidelity & Guaranty changed hands at 101.

Other securities traded in were as follows: Atlantic Coast Line, 107 and 107½; do. Consolidated 4s, 94¼ and 95; do. 4s. of South Carolina, 100; do. new 4s, certificates, 85; Northern Central stock, 72½ to 73½; do. do. warrants, from 8½ down to 6¾; Charleston & West. Carolina 5s, 110¼; Virginia Midland 5ths, 111; West Virginia Central 6s, 112; Augusta Railway 5s, 101 and 101¼; North Baltimore 5s, 118½; Virginia Electrical Railway & Development 5s, 94; Georgia Southern & Florida preferred, 94½ and 95; Georgia, Carolina & Northern 5s, 108¾ and 109; Richmond & Danville 6s, 117; Baltimore City 3¼s, 1927, 100¼; Chesapeake & Ohio Canal 6s, 100¼; Carolina Central 4s, 93½; Georgia & Alabama Consol. 5s, 105¼; Frederick City 4s, 1918, 100½; Norfolk City 5s, 1923, 107½; Northern Central 6s, 1904, 102½; Georgia Southern & Florida 5s, 114; Pittsburg United Traction, 113.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended
June 1, 1904.

Railroad Stocks.			
	Par.	Bid.	Asked.
Atlanta & Charlotte.....	100	155	...
Georgia S. & Fla. 1st Pref.....	100	92½	96
United Railways & Elec. Co. 5s	50	5¾	5%
Seaboard Railway Common.....	100	7¾	...
Seaboard Railway Preferred.....	100	16¾	17½
Atlantic Coast Line.....	100	107	107½
Atlantic Coast Line of Conn.....	100	220	...
Bank Stocks.			
National Bank of Baltimore.....	100	120	125
National Exchange Bank.....	100	...	190
National Howard Bank.....	10	11	...
National Marine Bank.....	30	33	...
National Mechanics Bank.....	10	30	...
National Union Bank of Md.....	100	117	121
Western National Bank.....	20	35	...
Trust, Fidelity and Casualty Stocks.			
Mercantile Trust & Deposit.....	50	132	134
Union Trust.....	50	30	40
Miscellaneous Stocks.			
G. B. & S. Brewing Co.....	100	4	5
United Elec. L. & P. Pref.....	100	25	...
Cotton Duck Voting Trust.....	100	1¾	2½
Consolidated Coal.....	100	...	88½
George's Creek Coal.....	100	...	86
Consolidated Gas.....	100	68¾	70¾
Railroad Bonds.			
Albany & Northern 5s.....	93	...	...
Atlanta & Charlotte 1st 7s, 1907.....	109	...	...
Atlantic Coast Line Con. 4s.....	95	...	...
Char. Col. & Aug. 1st 5s, 1910.....	115	...	...
Columbia & Greenville 1st 6s, 1916.....	117	...	...
Georgia, Car. & North. 1st 5s, 1923.....	109	...	...
Georgia South. & Fla. 1st 5s, 1945.....	114½	115	...
Georgia Pacific 1st 6s, 1923.....	125½	123¾	...
Petersburg, Class B 6s, 1926.....	124½	125½	...
Raleigh & Augusta 1st 6s, 1928.....	107	...	...

Seaboard & Roanoke 5s, 1926.....	108	...
Virginia Midland 1st 6s, 1906.....	104	...
Virginia Midland 2d 6s, 1911.....	111½	...
Virginia Midland 4th 3-4-5s, 1921.....	109	...
Virginia Midland 5th 5s, 1926.....	111	112
West Virginia Central 1st 6s, 1911.....	112	...
Wilmington, Col. & Aug. 6s, 1910.....	111	...
Charleston Con. Electric 5s, 1909.....	85	...
Knoxville Traction 1st 5s, 1928.....	101½	...
Norfolk Street Railway 5s, 1944.....	106	...
United Railways 1st 4s, 1949.....	89¼	89½
United Railways Inc. 4s, 1949.....	44¾	44½
Seaboard 4s.....	63¾	70
Seaboard 10-year 5s.....	96¾	96¾
Seaboard 3-year 5s.....	87	87¾
Lexington Railway 1st 5s.....	100	...
Georgia & Alabama Con. 5s.....	104¾	105½

Miscellaneous Bonds.

Mt. V. & Woodby Cot. Duck 5s.....	59¼	60
G. B. & S. Brewing 1st 3-4s.....	47¾	48
G. B. & S. Brewing 2d Incomes.....	18½	20
United Elec. Light & Power 4s.....	74½	74½
Consolidated Gas 6s, 1910.....	111¼	111½
Consolidated Gas 5s, 1939.....	113	...

Ending a Receivership.

Advices from Nashville, Tenn., are to the effect that the Tennessee Central Railroad Co. has paid off \$300,000 of its indebtedness, and that this is preliminary to abolishing the receivership, which was brought about by the petition of W. J. Oliver and others, Mr. Oliver, a leading contractor, being made the receiver. Drafts have been issued in payment of the claims of Mr. Oliver and other creditors, these claims being those which were represented in the suit for the receivership. Other claims are also to be paid off, and all the accounts of the company will be adjusted. It is further reported that a contract has been awarded by the company for an important terminal extension of two miles length at Nashville to reach a number of industrial plants there.

Richmond, Va., Finances.

The annual report of Auditor Edward J. Warren of Richmond, Va., shows that the assessed value of real property in the city is \$44,560,516, and of personal property \$37,063,705, a total of \$81,624,221. During the past fiscal year the receipts of the city were \$2,530,776.92 and the disbursements \$2,425,939.99. At the beginning of the year there was a balance to the credit of the city of \$63,046.90, and at its close a balance of \$167,883.83.

A Large Distribution.

The Baltimore Trust & Guarantee Co. of Baltimore is distributing \$600,000 among its stockholders, in accordance with the late decision of the shareholders to reduce the capital from \$1,000,000 to \$800,000. The total is represented by the payment (for each share canceled) of \$100 par and \$200 out of the surplus.

Markham, Texas.—The city has voted to issue \$5000 of school bonds.

Upper Marlboro, Md.—The school board has sold at 109.02 to Townsend Scott & Son of Baltimore the \$10,000 of 5 per cent. school bonds recently voted.

New Corporations.

J. A. Norwood of Greenville, S. C., is reported to be working on a plan to organize a bank at Cowpens, S. C.

The First National Bank of Clendennin, W. Va., capital \$25,000, has organized with L. V. Koontz as president.

The First State Bank of Hillsboro, Texas, has opened a branch at Osceola, Texas, with R. L. Watson, cashier.

The Bank of Stillmore at Stillmore, Ga., has applied for a charter; capital \$25,000. E. A. Edenfield and others are interested.

The Citizens' Bank of Camilla, Ga., capital \$30,000, has been organized by F. S. Perry, J. C. Wilson, Geo. C. Cochran and E. M. Davis.

A rumor from Memphis says that plans to establish a bank with capital of from \$2,000,000 to \$4,000,000 are under consideration.

The Tulsa Investment Co. of Oklahoma City, O. T., capital \$25,000, has been incorporated by Major Moberly, Lee Van Winkle and J. A. Woodsides.

The First National Bank of Owasso, I. T., capital \$25,000, has been approved.

The organizers are S. T. Wolfe, Ed Pierce, S. W. Miller, Wm. R. Smith and E. M. Macy.

The Sherman Loan & Investment Co. of Sherman, Texas, capital \$10,000, has been incorporated by H. E. Moody, T. E. Hopson, Charles H. Moody and Zed R. Porter.

The Bank of Greeleyville, Williamsburg county, South Carolina, has received its commission; capital \$10,000. The organizers are T. W. Boyle, E. B. Rhodes and S. J. Taylor.

The East Bernstadt Banking Co. of Laurel county, Kentucky, capital \$15,000, has been incorporated by J. C. Prichard, J. W. Harris and J. W. Creech, all of Laurel county.

The Cherryville Bank has been incorporated, with \$5000 capital, at Cherryville, N. C., by W. A. Manney, J. S. Manney, D. M. Baker, S. S. Manney, M. L. Manney and J. H. Wooley.

The Bank of Cedar Hill, Robertson county, Tennessee, capital \$10,000, has been chartered. The incorporators are E. S. Hawkins, B. S. Byrnes, A. W. Hobby, G. B. Fyke and T. L. Polk.

The First National Bank of Thomas, O. T., capital \$25,000, has been authorized to begin business. The officers are J. S. Huston, president; F. D. Curphey, vice-president; T. S. Garvin, cashier.

The Duncan National Bank of Duncan, I. T., capital \$30,000, has organized by electing officers as follows: J. M. Armstrong, president; J. M. Roberson, vice-president; J. D. Wade, cashier.

The Bayou State Trust Co. of Greenville, Miss., capital \$50,000, has published its charter. The incorporators are N. T. Burroughs, R. B. McMahon, Job Churchill, T. P. McMahon and William Griffin.

The First National Bank of Bolivar, Mo., capital \$2000, has been authorized to begin business. The officers are Richard B. Viles, president; L. M. Payne, cashier; C. W. Viles, assistant cashier.

The Bartlett National Bank of Bartlett, Texas, capital \$35,000, has been approved. The organizers are J. T. Bartlett, Bartlett, Texas; F. F. Downs, L. E. Bartlett, T. B. Benson, W. T. Cox and E. C. Hacker.

The Bank of Goltry has been chartered at Goltry, O. T.; capital \$10,000. The incorporators are T. D. Lawson of Goltry, J. C. McClelland, Conrad Strecker, J. D. Butts and C. S. Ingersoll of Pond Creek.

The First National Bank of Commerce at Commerce, Ga., capital \$25,000, has been approved. The organizers are W. B. Hardman, J. M. Nix, W. D. Sheppard, L. D. Davis, Claude Montgomery and Homer Harber.

The New River Banking & Trust Co. has been chartered at Thurmond, W. Va.; capital \$50,000. The incorporators are H. P. Cannon, M. M. Williamson, A. L. Ruffner and H. M. Williamson, all of Charleston.

The Texas State Trust Co., capital \$100,000, has been incorporated at Fort Worth, Texas, by R. E. Maddox, John W. Wray, J. D. Read of Fort Worth, Leonard Imboden of New York and J. A. Hill of Enid, O. T.

The Olive Hill National Bank of Olive Hill, Ky., capital \$25,000, has been approved. The organizers are W. J. Rice, Olive Hill, Ky.; U. S. G. Tabor, Claude Wilson, A. W. Kozee, W. A. Large and Alfred Hall.

The Farmers and Merchants' National Bank of Grandview, Texas, capital \$30,000, has been authorized to begin business. The officers are: O. L. Wilkinson, president; J. B. Harrell, vice-president, and R. E. Pitts, cashier.

The National Citizens' Bank of Charles Town, W. Va., capital \$50,000, has organized with the following officers: Braxton D. Gibson, president; John C. Burns, vice-president; H. C. Getzendanner,

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cashier; J. Frank Turner, assistant cashier.	
The following bank charters have been approved in Mississippi: Bank of Kil-michael, Montgomery county, capital \$30,000; People's Bank of Utica, Hinds county, capital \$50,000; Panola County Bank, Sardis, capital \$30,000.	
The First National Bank & Trust Co. of Council Hill, I. T., capital \$100,000, has been incorporated by R. L. Ney, T. H. Martin, Otto E. Sump and N. A. Gibson. Officers elected are: R. L. Ney, president; N. A. Gibson, vice-president; Otto E. Sump, secretary and treasurer.	

[For Additional Financial News, See
Pages 36 and 37.]

